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Illustrations OF HOSPITAL PRACTICE:

METROPOLITAN AND PROVINCIAL.

ST. GEORGE'S HOSPITAL.

TWO CASES OF LITHOTRITY, FOLLOWED BY PYÆMIA.

CASE I. William H., aged 70, was admitted, under the care of Mr. Hawkins, on August 6th, on account of stone in the bladder, of large size. His general health was good, and the symptoms not very severe. The urine contained a good deal of blood, but was otherwise healthy. The urethra was of the full size, and the prostate offered no obstacle to the passage of an instrument. It was determined to perform the operation of crushing the stone, and this was accordingly done on Aug. 18th. A large and hard lithic acid calculus was found, and broken to pieces, one of which was reduced to powder. No severe symptoms followed; and the operation was repeated in a week, and then at short intervals during the next month. After the first few sittings, the urine was always clear and acid, showing no traces of inflammation of the bladder, though the patient complained of some pain in making water; but, after the sixth sitting, the urine contained ropy mucus, and was alkaline for two or three days afterwards. After the eighth sitting, the pieces were collected, and weighed 110 grains: they consisted of a mixture of lithic acid with a small quantity of fusible phosphates. After this, three more operations were performed; the last (eleventh) on the 1st of December. He was by this time considerably out of health, and was losing flesh and spirits. On December 4th, rigors came on, attended with bilious vomiting and diarrhœa. He was very thirsty, with dry brown tongue, and pain in the back and abdomen. The principal symptoms, from this time to that of his death, were diarrhœa, great prostration, drowsiness, and pain in the region of the right kidney, aggravated on pressure. Towards the end of his life, he was in a state of wandering delirium, moaning constantly. He died on December 13th. The whole of the stone passed up to the time of his death weighed 210 grains.

Chloroform was not administered in any of the operations.

POST MORTEM EXAMINATION. The body was universally of a deep yellow tinge. There was recent pleurisy on the right side of the chest, the pleura being covered with a very thick layer of lymph; and there was much yellow opaque fluid, mixed with flakes of lymph, in the pleural cavity. There were several circumscribed deposits of pus in the substance of the right lung: similar and more numerous deposits were found in the left lung, especially its lower lobe. The spleen was large, and soft in texture. A large abscess, containing very foul matter, was found between the surface of the right kidney and its capsule; it was connected with a sloughing abscess of the kidney itself, which extended some little way into its substance. There was also a second abscess, of smaller size, deeper in the same organ. The left kidney was of normal size; its surface was smooth, and presented a few cysts, with limpid transparent contents. There were two or three dark patches on this surface. Both ureters were slightly dilated and thickened, and their lining membrane was vascular. The bladder was of normal size and thickness; its mucous lining only a little more vascular than natural. It contained several large fragments of calculi, apparently originally two in number, which had been recently crushed. The middle lobe of the prostate was much enlarged, and projected considerably into the bladder, immediately behind the orifice of the urethra. The pieces of stone found in the bladder weighed, after drying, 390 grains.

CASE II. Richard D., aged 64, a farmer, apparently in good health, was admitted on January 23rd, 1857, under Mr. Hewett's care. He had had the usual symptoms of stone for many years, and had latterly experienced more pain than usual. The water contained blood and pus, and he had suffered on more than one occasion from retention of urine. The calculus was very easily felt; and, as the surface of stone swept over by the sound appeared to be very large, Mr. Hewett was anxious to perform the operation of lithotomy. To this, however, the man would by no means consent, as he dreaded "cutting"; but was prepared to submit to any other treatment. Accordingly, on January 29th, amylene was administered, and the operation of lithotrity performed. The calculus which was seized was of considerable size, and yielded very easily to the instrument; so that the pressure of the hand was sufficient to crush fragments of moderate size. The patient passed a bad night, and complained next morning of considerable pain in the bladder and urethra, and passed urine (with some fragments of calculus) involuntarily. The urine became very turbid, loaded with thick stringy mucus. He was ordered opiates, but without much relief to the pain; and, on February 2nd, rigors supervened. On the 4th, a yellow tinge of the skin, which gradually deepened up to the time of his death, indicated the presence of pyæmia. He became insensible in the evening, and died next day, exactly one week after the operation.

On *post mortem* examination, the skin was found intensely yellow, and even the lining membrane of the heart had acquired a deep yellow colour. The peritoneum was healthy; the spleen engorged and rotten. The kidneys were large, their cortical parts being yellow and light coloured. The mucous membrane of the pelves was thickened, soft, and pulpy, and covered in one or two places with blood. The ureters were vascular. The bladder was somewhat thickened and fasciculated, with one or two patches of ulceration at its posterior and lower part. It contained three large pyramidal masses of calculus, all of nearly the same size, about an inch in height; and the fragments of a fourth calculus, which had evidently been of the same shape and size as the others. These weighed, when fresh, altogether 2 oz. 40 grs. The prostate gland was large, and the urethra very vascular.

REMARKS. These cases of lithotrity present several points of interest. In the first place, they suggest considerable doubts as to the advisability of the operation in cases where the stone is large, even although all other symptoms may be favourable. In the first case, the patient, although old, was in perfectly good health, and the kidneys must have been as healthy as they are ever found after some years continuance of stone in the bladder. The various operations never gave any unusual pain; and the bladder, as proved on *post mortem* inspection, was entirely uninjured by the lithotrite. The continuous irritation, however, gave rise to inflammation, extending up to the kidney, and followed by abscess in that organ; and this again became the exciting cause of secondary infection in the blood, an event which was favoured by the extreme depression which followed on the protracted treatment necessary in crushing a large and hard stone. Another point of interest is the quantity of stone which was removed by the operation, compared to that left in the bladder. It will be seen that the quantity remaining in the bladder was not far short of twice as much as that collected after eleven sittings; so that, allowing for waste in collecting the latter, and for the progressive increase in the quantity passed after each operation as the fragments became reduced in size (which is shown by comparing the quantity passed after eight sittings, 110 grains, with that passed after the next three, 100 grains), it is impossible to suppose that the whole stone could have been removed in less than double the number of sittings. This is a very serious element in the calculation, when it is considered that the operations already performed had extended over more than three months, though repeated as frequently as prudence allowed. It is not,

therefore, without reason that many surgeons doubt the expediency of submitting cases of large and hard stone to a treatment which is so protracted and subject to so many risks. It must be allowed, indeed, that the choice is not easy, as in these cases the operation of lithotomy is very frequently followed by death; still, if the patient be in good health, and the urine exhibit no evidence of organic disease of the kidneys, the cutting operation has a fair chance of success, is followed in most instances by less irritation than crushing, and, if successful, restores the patient to health in a far shorter time. We shall give the particulars of an operation performed at St. George's Hospital by Mr. Tatum, on March 5th, in a case of this kind, as soon as it is completed.

The second case is peculiar from the great rapidity of the fatal termination after an operation which seemed in no degree dangerous. The case was not indeed, and was known not to be, a favourable one for lithotrity, on account of the very large mass of stone contained in the bladder, and would have been the more favourable for cutting, as this mass was divided into pieces which could have been easily extracted. As, however, the treatment was dictated by the patient, there was no choice in the matter. The operation was accomplished without any force; the piece of stone seized had been caught in the most favourable position, and yielded easily to the instrument.

There was no evidence at the *post mortem* examination of any violence having been done to the bladder, as the patches of ulceration found seemed to be of old standing. That pyæmia should have supervened so speedily on the inflammation set up by the operation is, of course, an accidental circumstance, which might just as easily have followed the wound of lithotomy; it shows, however, that lithotrity is not quite so free from risk as is sometimes supposed. That the death was correctly attributed to pyæmia, although it occurred too soon to allow of the decisive evidence of secondary deposits, is sufficiently proved by the course of the symptoms, the deep yellow stain of the skin and other membranes, and the absence of any other cause of death.

WESTMINSTER HOSPITAL.

LOCAL TREATMENT OF CANCER.

Under the care of BARNARD HOLT, Esq.

[*From notes by* G. NAYLER, ESQ., *House-Surgeon.*]

E. B., a female, aged 28, married, was admitted Oct. 25th, 1856, on account of scirrhus of the breast, which had been noticed only two months. When she first perceived it, it was of the size of a walnut. She knew of no cause for it, and there was no hereditary history. Her health had, however, been delicate, and she was subject to enlarged glands. On admission, the tumour was fungating out of a small opening which had been made in the skin on account of superficial suppuration a few days before. The growth had been increasing rapidly, with much lancinating pain and loss of sleep. Her pulse was rapid and weak, general health feeble. A collection of pus deeper in the tumour was evacuated a few days after admission; and after her health had been somewhat restored it was determined to give her the chance of an operation. This was done on December 19th. In a month afterwards (January 21st) the tumour was found to be recurring in the form of a fungous mass springing from the centre of the incision, and two or three small nodules along its upper margin.

On the 28th the caustic recommended by Professor Simpson (sulphate of zinc made into a paste) was applied to the diseased parts, the cuticle having been previously removed, where necessary, by a blister, and morphia sprinkled on the ulcerated surface. This application caused acute pain for three hours, and less severe suffering for two hours afterwards. The slough separated in six days, and the surface exposed looked healthy. The mass, however, continued to grow.

On February 5th the sulphate of zinc was again applied (in powder), but it caused such intense pain, and was so powerless to check the rapid growth of the diseased mass, that it was evidently useless to repeat it; and the case was abandoned to a palliative treatment.

REMARKS. The cases hitherto reported of the local treatment of cancer by escharotics in this JOURNAL have, with one exception, been followed by at any rate temporary benefit. The exception was one under Mr. Curling's care at the London Hospital, where, however, the case was so evidently hopeless, that the treatment was never much insisted on. The present was an unfavourable case, in consequence of the great rapidity with which the tumour was growing, and its speedy return after operation. The caustic treatment here appears to have been quite powerless in checking the disease, and to have produced great increase of the patient's sufferings.

ST. BARTHOLOMEW'S HOSPITAL.

TWO CASES OF INJURY OF THE EYEBALL.

Under the care of W. LAWRENCE, Esq.

[*From notes by* G. W. CALLENDER, ESQ.]

CASE I. *Temporary Loss of Vision following the blow of a Whip.* Edwin N., aged 25, was admitted Oct. 22nd, on account of a blow across both eyes from the lash of a whip received six days before his admission. The blow had caused very severe pain: he fell to the ground, and was picked up unable to see at all. In a few hours, however, he recovered sufficient vision in the left eye to follow his occupation (that of a drover) for a few days. The right eye, however, continued blind, and he suffered much from pain across the brow on that side. On admission, the only morbid appearance noticed was that the right pupil was dilated and fixed, and the cornea surrounded by a faint vascular zone.

The treatment consisted in taking blood by cupping on the temple, and the administration of mercury to salivation. As the mercurial agency became established, improvement in vision commenced and progressed steadily, and he left the hospital, with very fair vision, on the twenty-third day.

REMARKS. In this case the loss of vision was probably due to the cause vaguely spoken of as "concussion of the retina," a morbid condition, the precise anatomical nature of which is ill understood, and no doubt varies much in different cases. From the rapid and decisive improvement which followed the exhibition of mercury, it may be conjectured that in this instance there was some inflammatory exudation following a disturbance in the circulation of the retina, analogous to that which has been observed in the cerebral circulation in cases of concussion of the brain, and which produces those minute extravasations described by several English and French writers. As a contrast to the above, we shall briefly cite another case, in which the lesion to the deeper parts was of a more permanent character, and the loss of vision irremediable by medical treatment. In this no antiphlogistic means were indicated, and nothing remained but to watch the progress of the case, in the hope (which, however, was not realised) that the absorption of the effused blood might be followed by partial recovery.

CASE II. *Wound of the Sclerotic: the Iris protruding through the Wound: the Conjunctiva remaining uninjured.* John W., aged 43, was admitted Oct. 18th. He had received a blow across the right eye from the bough of a tree, three days before admission. On examination, a small black prominence was seen under the conjunctiva on the inner side and above the cornea, which caused considerable irritation and pain by rubbing against the upper lid. There was a slit in the iris in a line with this prominence, and a small part of this muscle was seen on each side of the slit, the remainder being concealed by extravasated blood, which nearly filled the anterior chamber. This extravasation increased, till on the fourth day it nearly filled the chamber and concealed the iris. Under simple tonic treatment, however, it was gradually absorbed, and on the 17th of November the patient was discharged.

At that time, there was total loss of vision, the conjunctiva was rather thickened over the discoloured spot, and a few vessels converged towards its margin. The prominence was less considerable, and no longer produced irritation. The slit in the iris remained; otherwise that muscle presented its natural appearance. The eye was examined with the ophthalmoscope, but no morbid appearance was detected.

ST. GEORGE'S HOSPITAL.

CASES OF EMPYEMA, PNEUMOTHORAX, AND PLEURITIC EFFUSION.

Communicated by G. GODDARD ROGERS, M.D., Medical Registrar to the Hospital.

CASE I. Under the care of H. Bence Jones, M.D., F.R.S. G. D., aged 40, a hatter, was admitted on 8th June 1854, in a state of great excitement and tremor, the result of three weeks constant devotion to the bottle. He had suffered three times during as many years from delirium tremens; and this attack commenced on the 5th of June. His general health had been excellent, and he never had any cough until the last named

date. The tongue was dry and tremulous; the pulse 112, and feeble, easily compressed; the skin covered with perspiration. The lower part of the left lung was quite dull on percussion, and ægophony could be clearly heard. Above, loud bronchial breathing existed. The sputa were mixed with blood. His manner was irritable and peevish; he called himself quite well, and refused to be treated medically. It was not until the 11th that sleep could be procured. A blister was put upon the left side; and two grains of calomel and a grain of opium were given every four hours, in conjunction with a febrifuge draught containing ten minims of laudanum; strong beef-tea was also taken at intervals.

June 9th. His cough distressed him very much. The expectoration was copious, and tinged with blood. He perspired profusely, and was still very tremulous, but quite rational. The urine was high coloured, and free from sediment or albumen. Towards evening he was more excited, and would not take the medicine. About midnight he became very violent, tearing his blankets to pieces, and using the most abusive language. He was placed in a padded room, and allowed porter, with drachm doses of laudanum every few hours; but he obtained no sleep.

June 10th and 11th. He continued in the same frantic state. On the second night, he slept for several hours, was quite rational when he awoke, and was at once taken back to the ward. His tongue was much furred; pulse 112, and very feeble; the perspiration was excessive; and the cough no better. There was want of breathing over the whole of the left lung. Calomel was given every four hours, the blister repeated, and two quarts of porter were allowed.

June 13th. He passed a tolerable night, and required much less opium. Pulse 108; tongue much cleaner; expectoration thinner, and rust coloured. The auscultatory signs were just the same. At night he took two drachms of tincture of opium, and slept well.

June 14th. The gums were swollen and tender. Bronchial breathing and ægophony were heard at about the middle of the left lung posteriorly. He was ordered to have wine and fish.

June 15th. Pulse less frequent; tongue not so clean. He slept well, and did not complain of his cough. The heart was observed beating to the right of the sternum. In the afternoon there was much dyspnœa, which continued all night, and up to the time of visiting him on the 16th. A pustular eruption appeared on various parts of the trunks and extremities, dependent, no doubt, upon the impoverished state of the blood; for he had taken scarcely any nourishment since the 13th. The intercostal spaces were obliterated on the left side, and the heart was still more displaced. A grooved needle was passed into the chest: on withdrawing it, the groove was filled with serum.

Up to the 19th, no alteration for the better occurred. He perspired constantly, and each night was restless and delirious. On the 19th and 20th, his appetite improved, and he was put upon a generous diet.

June 23rd. He laboured under a smart attack of bronchitis, which soon left him; but the left side was becoming more distended with fluid, and greatly interfered with his respiration.

June 27th. He was in such distress about noon, that a trocar was introduced, and thirty-two ounces of thin pus were drawn off, to his immediate and sensible relief.

June 29th. Breathing could be heard over a small space at the upper part of the left lung.

July 2nd. The left side was quite dull; the heart was pushed completely over to the right. The night-sweats were more profuse than ever, and the cough harassed him incessantly. His appetite, notwithstanding, continued improving.

July 3rd. He was again tapped, and thirty-five ounces of fluid, similar to the last, were withdrawn. A week of comparative comfort followed.

July 13th. The left side was totally dull, and bulged out in a remarkable manner. An incision was made, and eighty-two ounces of thin puriform fluid were evacuated. A profuse discharge of most offensive pus drained from the wound during the remaining five weeks of his life.

July 25th. A loud pericardial friction-sound was heard. He had vomiting, loss of appetite, and restlessness; but no pain in the præcordial region. Suffice it to say, that under suitable treatment, he recovered from a severe attack of pericarditis, and went on well until August 4th. Cholera was then prevalent, and every medical ward contained one or more cases. He began to vomit his meals occasionally: in other respects, he continued the same, and ate and drank well: and although he perspired much both night and day, he made no complaint of increasing weakness until the 14th. The wound in the side discharged freely. He sat up a little, and, to all appearance, showed marked signs of amendment. A slight attack of diarrhœa, just sufficient to awaken vigilance in the then peculiar condition of the hospital, occurred on the 23rd. It was not until the 30th that severe symptoms manifested themselves. Vomiting, rice-water evacuations, and cramps, then rapidly came on, and he sank in less than twenty-four hours.

The body was examined twenty-six hours after death. The left pleural sac was almost full of thin pus. The lung was compressed against the spine. The right pleura and lung were natural. No tubercles existed. The pericardium was universally and firmly adherent. The whole of the intestinal mucous lining was of an ashy colour, and Peyer's patches were much enlarged.

Case II. Under the care of H. Bence Jones, M.D., F.R.S. C. O'K., aged 25, admitted on December 17th, 1856, had been out of health two months. He attributed his weak condition to long continued exposure in his work, and to hard drinking. Three weeks before his admission, he was attacked with cough and acute pain in the left side. He was emaciated, and had a small weak pulse, and a patchy tongue. The right side of the chest was free. At the upper and back part of the left lung there was metallic resonance on speaking and breathing; and on succussion, a splashing was distinctly heard. There were considerable dyspnœa and congestion of the face, which continued for some days; and he scarcely slept at all.

December 19th. Diarrhœa came on. His cough was more troublesome, and was accompanied by a great deal of muco-purulent expectoration. Opiate injections were administered, and port wine given freely.

December 23rd. He had frequent vomiting, profuse perspirations, and great restlessness at night. His appetite was tolerably good.

December 25th. The heart's impulse was very feeble, but most perceptible to the right of the mesial line. The sounds were dull and distant, but there was no murmur. Increased vocal fremitus was perceptible over the right lung. A slight amount of respiration could be heard at the left apex; the rest of that side being dull on percussion.

December 26th. The fluid in the left pleura reached to the level of the heart; and at each beat a metallic sound was heard coinciding with the pulse. The attacks of diarrhœa were less frequent, but he continued to take astringent medicines.

December 28th. Crepitation and bronchial breathing were detected at the upper part of the right lung. The metallic click was more plainly distinguished on the left side, and it reached its greatest intensity on the 1st of January.

January 3rd. The metallic click was not so audible. The splashing upon succussion was as marked as ever. He was troubled with vomiting for the next twenty-four hours.

January 6th. He again rallied, although at night much harassed by the cough. The metallic sound was somewhat modified. It resembled pretty closely the ticking of a watch, and was synchronous with the heart's systole.

January 9th. When I saw him, he was sitting up by the fire, dressed; and in this position none of the sounds peculiar to the left side were heard. When he lay down in the afternoon, those who saw him recognised the metallic ring as clearly as before. Perhaps his change of posture contributed to the dyspnœa from which he suffered during the night, and throughout the whole of the 10th. Paracentesis was contemplated a day later, but he sank before the operation could be performed.

The examination was made thirty-six hours after death. On opening the thorax, a quantity of air rushed out of the left pleural sac with a hissing sound, and the parietes of the chest fell in to a considerable extent. The cavity contained five pints, by measure, of thick creamy pus. By an adhesion of the lung to the costal pleura about midway, the cavity was divided into an upper and a lower reservoir: the walls of both being much roughened by a very thick layer of lymph. The left lung was much compressed, and upon its outer surface near the apex was a small orifice, into which a probe could be introduced. This led into a vomica of the size of a hazel nut, and *here* was a free communication with one of the smaller bronchial tubes. The rest of the lung was carnified. Tubercles and several small vomicæ existed in the apex of the right lung. The heart and its valves were healthy. Nothing abnormal was detected amongst the abdominal viscera.

Case III. Under the care of J. A. Wilson, M.D. J. B., aged 22, a discharged soldier from Canada, came to St. George's

Hospital for the second time in November last. He was discharged from the army in 1851, after an attack of "inflammation on the chest". Previously to this, viz., in 1849, he suffered from pleurisy; and when he recovered, he noticed his heart beating "on the wrong side". The surgeon who attended him used frequently to measure his left side, which gradually enlarged. In the autumn of 1850, his breathing was much affected, and his chest was tapped; 110 ounces of clear fluid being taken away. Five weeks later, 86 ounces were removed. A year after, when recovering from an attack of rubeola, 124 ounces were taken away; in another year, 90 ounces; and twelve months later, the same quantity. The last operation was performed in February 1854, when another 90 ounces were withdrawn.

He came in suffering from slight bronchitis, from which he soon recovered; and, although he had made up his mind to undergo another operation, yet the comparative freedom of his respiration led Dr. Wilson to advise its postponement until more urgent symptoms should arise. He therefore left in the course of two or three weeks. The girth of his chest, which in the summer had been forty-one inches, was reduced to thirty-six inches, as was discovered by the tailor who measured him for a coat prior to his admission. When he went out, the measurement was not more than thirty-five inches.

CASE IV. Under the care of W. E. Page, M.D. G. C., a blacksmith, aged 37, who came in on December 1st, had pleurisy three years and a half since; and great bulging of the left side and constant dyspnœa followed the attack. In five months he was tapped, and 66 ounces of clear fluid were removed; two months later, 156 ounces; three months after this, 96 ounces; in four months, 95 ounces; and finally, in December 1854, 65 ounces. From this date up to the time of admission he had been constantly at work; only making complaints of "fluid rolling about in his chest" when going up-hill or up-stairs.

The heart was pushed somewhat over to the right; and there was a difference of about three-eighths of an inch between the two sides. His tongue was coated; pulse quickish; face a little flushed; and respiration slightly hurried. In a day or two these symptoms vanished; he said that he felt quite well; and suddenly took it into his head to depart.

However, on January 28th, he again made his appearance, complaining of increased dyspnœa, and giving an account of some "inflammation on the chest" during his absence from the hospital, which attained its height towards the close of the first week in January. The cough and expectoration had not by any means abated, although the breathing was tolerably clear on the right side.

On February 7th, when the ear was applied just below the left scapula, a distinct metallic ring was audible on succussion. He still remains in the house; and, after taking calomel and opium until soreness of the gums supervened, he has been put upon iodide of potassium three times a day, and a morphia draught at bedtime. The heart is pushed a little over to the right; the affected side measures eighteen inches; the healthy one nineteen. He complains most of a burning pain at the lower part of the left side, and a sensation of faintness after succussion has been tried.

The case may subsequently afford matter worthy of a more extended report; at present, the chief point of interest is the metallic ring on succussion, indicating the presence of air in the pleural cavity. The sound, however, cannot be obtained by simply making him cough or speak; widely different from Case II, where the signs of pneumothorax were so well marked. That the communication with the external air was caused by ulceration and perforation of a bronchial tube during his late inflammatory attack, there can be little doubt; for when he was a patient in December, no splash of fluid in the chest was heard.

REMARKS. The two cases of hydrothorax here brought forward exhibited great bulging of the affected side, quite as marked as in any case of empyema—perhaps, more so. In many other instances of serous effusion, the same obliteration of the intercostal *sulci* has been observed; and it really does not seem very easy to explain what some writers mean when they speak of this dilatation of the chest as a condition peculiarly appertaining to purulent effusion. Great enlargement of the side, which contains a collection of pus, is exemplified in Case I; but in Case II, where there was also a difference between the two sides of the chest, the contained air must have had much to do with the distension of the left side. In this latter case, had time been afforded for puncturing the pleura, the relief would only have been temporary. With tubercles in the lungs, the man must have sunk; but even had phthisis been absent, and the case progressed favourably, it could not have been set down as a *perfect cure*, if we are only to reckon as recoveries "the instances in which there is a perfect return of the affected side to its normal shape and capacity". Some deformity must have remained; for with a band of lymph stretching from the pulmonary to the costal pleura, such as was discovered after death, the dragging in of the parietes of the chest would have been considerable. If absence of contraction is the criterion of *cure*, then we must exclude Case I from the category. Yet, had cholera not seized upon the patient, there can be very little doubt, notwithstanding his broken constitution, that he would have gone out ultimately in comfortable health. And the very fact of an habitual drunkard, who had not one, but many, diseases to contend against, so far recovering, is a forcible warrant for rejecting the idea of the great danger of paracentesis thoracis; and adds another instance to those already adduced by Dr. Hamilton Roe, in confirmation of its safety.

Original Communications.

INFLAMMATORY ACTIONS, AND THEIR TREATMENT.

By C. HANDFIELD JONES, M.B., F.R.S., Assistant-Physician to St. Mary's Hospital.

THERE is a pathological state in which, while the functional power of a living tissue is greatly lowered, or wholly arrested, its attraction for the blood is greatly increased. More of this fluid rushes to the spot through dilated arteries, reflux thither takes place through the veins, heat is considerably increased, and fibrinous exudation is poured out. This state is familiar to us all. We call it *sthenic* inflammation. It is often also called *acute*, but this term is less appropriate, because *asthenic* inflammation may run a rapid course, and sthenic again may be *chronic*, or slow in its progress. If the focus of disordered action in sthenic inflammation be extensive, or if the system be irritable, the heart's action is accelerated, and general pyrexia takes place. Sthenic inflammation requires that the general vital power shall not have been lowered either by preceding circumstances, or the exciting cause. I wish to lay particular stress on the part which the local attraction plays in sthenic inflammation. True, it is what we cannot see itself, but its existence seems to me positively determined by the following facts. There is increased arterial afflux, there is venous reflux, the red and the white corpuscles adhere to the sides of the capillaries, and do not become detached until the inflammation is subsiding. Whoever has carefully watched, in the frog's web, stasis occurring, and undergoing resolution, will be convinced, I think, that a dynamic relation between the blood and the tissue is mainly concerned in producing the phenomena observed. The existence of local attraction is also strongly evinced by the common experiment of applying pressure to the inflamed part. In sthenic inflammation it is ill borne, and scarcely excludes the blood even for the time it is applied. Hughes Bennett, W. Jones, Paget, Weber, Virchow, not to mention others, look upon this local attraction as the prime element in sthenic inflammation. I adopted this view in the *Manual of Pathology*, and will now further add, that I think the term *tissue* inflammation is in several respects preferable to sthenic. It specially puts forward the part played by the affected structure in the morbid process, and serves an important distinctive purpose.

The typical condition which I desire to contrast with the foregoing is *asthenic* inflammation, which in some respects might advantageously be designated *nerve* inflammation, for reasons which we shall immediately see. In this the part affected is hyperæmiated, overmuch blood being poured in through relaxed arteries; its functional power is impaired; its temperature is elevated, though less than in tissue inflammation; and it is often the seat of exudation. Respecting the microscopic appearances in such a state, we cannot say anything certainly, but it is probable that the arrest of the blood in the capillaries, and the adhesion of the corpuscles to their walls, would be wanting, or exist in only a slight degree. From naked eye observation, however, we are sure that there is much less local attraction than in tissue inflammation, the hyperæ-

miated parts are much more readily emptied by pressure, and the blood returns into them again much more slowly. If pyrexia exist, and the heart's action is accelerated, the pulse is not hard as in the former case, but yielding. Between these two states there is very much of apparent resemblance, and indeed that which positively differentiates them is only their dissimilar reaction when tested therapeutically. Thus one case of eczema, or psoriasis, will be aggravated greatly by the administration of arsenic, another will be cured quickly by it. One case of bronchitis will be greatly relieved by frequent doses of ipecacuan, another is not in the least benefited by it, but soon gets well under nitric acid and tonics. One case of pleuritis does admirably under calomel and opium, in another the same remedy is only prejudicial. Iritis, though for the most part yielding to mercury, is sometimes controlled better by oil of turpentine. The origin of such inflammations as we are considering is perfectly illustrated by the phenomena observed when the sympathetic is divided in the neck of an animal. The arteries of the part, to which the nerves divided are distributed, immediately dilate, throb strongly, are turgid with blood as well as all the vessels they supply, while the temperature rises considerably. If the animal be weakly, severe conjunctivitis may ensue with muco-purulent exudation. Stimulation of the divided nerve brings about contraction of the arteries, and cessation of the hyperæmia and heat.

Now, in the case of an asthenic inflammation, when we give a nervine tonic, arsenic, strychnine, or quinine, and find the train of morbid phenomena cease and disappear, is it not reasonable to conclude that the remedy acts by stimulating the vascular nerves, and so causing the same effects as in the experiment just detailed? It may further be remarked, that in cases of this nature, the persistent tendency to congestion of a tissue which has been inflamed illustrates well the deficiency of the capillary walls in contractile power. A patch of asthenic eczema, or psoriasis, may be cured by arsenic, so that there shall remain nothing more than an increased redness of the part, effaceable easily by pressure, but returning slowly after the pressure is removed; this, however, is most slow to yield, persists long after all other trace of the disease has ceased, and forms a basis (so to speak) on which this morbid action readily recurs. The cause of this is that the arteries leading to these capillary vessels have contractile coats, which readily respond to the nervine stimulus, while the capillaries, having only walls of simple homogeneous membrane, remain but little affected. As the sympathetic plexuses do not accompany the arteries of the limbs, or but scantily, there appears a difficulty in understanding how the vaso-motor nerves of these parts are supplied. In careful microscopic examination of the fingers, I have found nerve-bands, exactly resembling those of the sympathetic given off from the cerebro-spinal nerves, and it is probably through these that the vessels are influenced. I do not, of course, doubt that the arteries are often directly contracted by cold, but the phenomena of an algide fever could not be thus explained. Though the temperature of palsied limbs is usually lowered, I have observed a case in which it was more than two degrees above the sound one. In this, the paralysis may have involved the vaso-motor filaments.

Could we always have to deal with marked typical cases of sthenic and asthenic inflammations, our practice would be very simple and clear. Annul the tissue irritation in the one case, and give tone to the vessels in the other, *et voici tout*. But it can never be repeated too often, that types are far more rarely met with than intermediate instances, and therefore all our skill and acumen is constantly called into exercise to determine whether a given condition approximates more to the one type or the other, and to regulate our treatment accordingly. We must describe types to have landmarks, otherwise all safe proceeding would be impossible, and I by no means join with them who sneer at book descriptions and say they never meet them in practice. It is possible they may not; but every case they treat they ought to be able to refer to a position marking its approximation to one type or another. In sthenic systems, to annul tissue irritation may be all that is requisite, and it may be needless or even injurious to endeavour to tone the nerves. In multitudes, however, of weakly systems, the first of these indications is very speedily satisfied, or the time for it has passed away; and the second requires long efforts, perseverance, and management. The nerve power is weak and low, and is depressed again and again by trifling causes.

In the above remarks I have taken the case of pure and simple inflammations, not depending on the presence of any actual *materies morbi* in the blood. Among these I include many of the commoner diseases, the every-day instances of conjunctival, bronchial, gastric and intestinal catarrh, the scaly and vesicular eruptions, and inflammations produced by injury. From the therapeutical point of view, appealing as it does to vital reactions, and thus, as it seems to me, penetrating farther than others, we might extend the above list, and include the inflammations of measles, scarlatina, and, I think, continued fever. We deal with these on the same principles as we do with other non-specific inflammations; we do not trouble ourselves much about eliminating the supposed poison, but counteract its effects as well as we can. Even in syphilitic disease, where the system is under the influence of a communicated poison, what is more likely to bring on a relapse, after apparent cure, than any deterioration or breaking down of the general health, and what constitutes a better prophylactic than the maintenance of a vigorous state of the system? Our best curative endeavours do not, I think, go much in the direction of elimination; they rather counteract local manifestations of morbid action, and then seek to raise and maintain the general health and vigour.

Parallel with the inflammations, forming a kind of sister group ("facies non una, nec diversa tamen"), are the fevers. Viewed in a very general way, they present the same types, the sthenic, and the asthenic or low. The former (of which we see scarce anything nowadays) requires and is benefited by venesection, purgatives, antimony, refrigerants, and such treatment as is appropriate to sthenic inflammation. The latter commonly requires a large amount of wine and support from a very early period. The chief character of the first is excitement and irritability of tissue; of the second, vascular paralysis, the contractile power of the heart as well as of the arteries being much impaired.

Two other groups which may be noticed are the fluxes and the hæmorrhages. The *asthenic* form of each depends essentially upon paralysis of vessels, the difference in the profluvium being attributable to some condition of the capillaries or of the surrounding tissue that cannot be exactly defined. Whatever tones the nerves of the vessels will arrest, whatever has the opposite effect promotes these discharges. Depressing mental influence (*vide* Dr. Basham's case in the *Lancet*, Jan. 31st, 1857), cholera miasm as observed by Dr. Prout, and low fever poison as in a case which I recently saw, will all induce hæmaturia. Sthenic hæmorrhages resemble fevers of the same type in being attended with great excitation of the heart's action, the arteries of the part affected being, however, uncontracted, from paralysis of their vaso-motor nerves. The bleeding from the nose, which occurs sometimes during the paroxysm of tropical remittent fevers attended with cerebral determination, is a case of this kind. The sthenic fluxes have, as their principal character, a superexcited state of the tissue whence they proceed. The condition is akin to inflammation, but, owing to some peculiar modification of vital power, the exudation is thrown off on the free surface as fast as it takes place. Choleraic purging is the most marked example of this kind. Nerve-toning remedies which will arrest asthenic fluxes will not stop sthenic; resort must be had to means which will modify the excited state of the affected surface. This may be effected, in some cases, by castor oil (according to Dr. G. Johnson's plan); in others, by repeated small doses of calomel, or calomel and opium; in others again, by repeated mustard emetics; in others, by frequent doses of diacetate of lead and opium. The effect produced by all these when successful (as all have been), is to nullify the excitation of the gastro-intestinal mucous surface. Dr. Billing's treatment by tartar emetic has the same therapeutic intention. The frequent failure of all these measures to attain their end does not show that they were not appropriate, but either that they could not avail to overcome the morbid action, or that the peculiarities of functional power which would make one preferable to another, do not reveal themselves by any outward indication.

To resume: in inflammations, in fevers, in fluxes, in hæmorrhages, we see the existence of the same great types of morbid action; the asthenic, where arterial paralysis (through vaso-motor nerves) dominates; and the sthenic, where tissue excitement and irritation come to play the more prominent part. Nearly the same therapeutic proceedings are appropriate in each of the four sets, the character of the type being the all important circumstance.

Regarding tissue irritation as a prime element of sthenic inflammation, we ought to find notable differences between different parts in the frequency with which they are affected by it. It ought to appear that the greater or less amount of tissue proper is influential on the occurrence of inflammation. Now, it is notorious that membranous tracts and expansions are far

more prone to inflammation than solid parenchymatous organs. Inflammation of the substance of the brain, of the muscles, the heart, the liver, or the spleen, is decidedly rare; of the serous, mucous, or cutaneous surfaces, exceedingly common. One considerable cause of the difference seems to lie in this, that the considerable masses of living tissue persist more steadily in their own normal mode of nutrition, and are not so easily diverted from it into anomalous modes of action. Their functions are all eminently vital, and generally of a higher and more active kind than those of investing membranes. Such parts even of the latter as are more highly organised, and have more important functions to fulfil, are less prone to inflammation. Thus gastric catarrh is infinitely common, but is almost entirely located in the pyloric region, and in the fossulæ of the surface; the special gland-like structure of the splenic and mid regions being very little implicated. The liver, as long as its vital force is unbroken, is rarely the seat of abscess; when, however, it has been overstimulated, and consequently enfeebled, by tropical heat, a casual congestion may produce this effect. The lungs, themselves, though their function be in one sense eminently vital, yet are as liable to inflammation almost as their investing pleura, because their living tissue is scarce more than a mere homogeneous membrane, through which the function of respiration is performed on physical, not vital, principles. The point now referred to certainly puts in a striking view the influence of the tissue of a part on the occurrence of inflammation.

In the foregoing observations, I have frequently made use of the expression "tissue irritation"; and it may be well to attempt to define it somewhat more exactly, and to show what reasons there are for using it. This is the more desirable, because it is what we cannot estimate by itself, or observe so well as we can relaxed and dilated vessels. The term seems legitimate, because the condition to which it refers can be brought about by the application of irritants, such as mustard, or cantharides. The actual condition appears to be one of excitement, as the increased sensibility, blood-flux, and heat would indicate, together with the great tendency to cell development in the exudation. Probably, however, the excitement stage is the earlier, and ceases as soon as general or extensive stasis of the blood has occurred. Indeed, we seem to have evidence of this in meningitis, when the cineritious cortex of the hemispheres is involved, and fierce delirium and raving mark the stage of excitement, while collapse and coma mark that of paralysis of the tissue. In this there is a close analogy to fevers (*vide* Dr. Copland's description, p. 973-983), with their stages of excitement and collapse. In using the term excitement, it is of course not intended to imply that there is any increase of real vital activity and functional power. The action, though an excessive, is a perverted one, tending only to waste and loss of the normal endowment of the part. The difference between this state, and that of healthy excitement, is the same as there is between a sensory nerve in the fulfilment of its natural function, and the same numbed while tortured by the agonies of neuralgia (*vide* Romberg on Anæsthesia dolorosa).

[*To be continued.*]

NOTES ON LIQUOR PEPSINIÆ.

By David Nelson, M.D.Edin., formerly Physician to the Queen's Hospital, and Professor of Clinical Medicine, Birmingham.

Having received, through the Editor of this Journal, an inquiry in what manner liquor pepsiniæ is prepared, I have to say, in reply, that I never either prepared it, nor knew how it was prepared, excepting as laid down in the ordinary standard works on pharmacology; the following of which directions, however, often leads to failure. After using the remedy of gastric juice, in the shape of raw or of dried membrane, I desired to have an elegant and efficient preparation, and requested the chemists to make the attempt. After repeated experiments and failures, as to dimness, thickness, and tendency to putrescence, they at length succeeded in producing that pellucid, savoury, and effective fluid, to which I gave the name of *liquor pepsiniæ præparatus;* but I could not ask them, as *men of business*, to explain their mode of procedure, and have never done so.

Other correspondents have opened up other matters of inquiry, as to the comparative virtues of pepsine, so called; and the question of priority, etc.; which I shall, therefore, touch upon. Recent writings and advertisements have laid stress upon the production of such an article; but I think there are sundry objections to it, not the least of them being the price, and the consequent temptation to adulteration, of which more anon. Let me premise my observations by stating that, while I much admire and use extensively several of these essential principles, such as quinine, hydrocyanic acid, etc., and while the researches of chemists are much to be applauded, even while following out non-practical paths, I yet see no more necessity for pepsine, so called, as an article of the officinal materia medica, than I do for digitaline, ergotine, lupuline, castorine, emetine, lobeline, theine, and caffeine, or the other thousand and one niceties, highly interesting, but practically useless. As long as we can obtain, from sound plants, etc., good tinctures and infusions, we have all that we want for medical purposes; and so is it with the extraction and the preservation of the mysterious gastric juice from the maw of the sucking calf. Nay more, this pepsine, so called, is but a portion of the wondrous gastric juice. It is not, like iodine or sulphur, a simple body, the purer the better; but it is a complex and theoretic substance, the existence of which as a distinct efficient compound is denied by Liebig himself. But, accepting it as a compound radical, it yet acts within the stomach as only co-operative with other agents; and this gives rise to the danger of its losing its peculiar action in the very attempts at over-refinement. The iron of the blood, like the iron of nature, is always allied with a minute amount of manganese; and it is very questionable if over-purified or chemical iron would serve either as a medicine or a nutrient. Porters, ales, wines, and all spirits, possess one common and fundamental principle of spirit of wine; but the common sense of the profession and of the world would rebel against any attempt to supersede the use of these composite beverages by introducing absolute alcohol, or perhaps, by a further refinement in abstracting the useless water, treating us to medicinal or social doses of ether. Recent writers have remarked of the so called pepsine (a theoretic name, be it remembered, for a mysterious essence known only by its effects), that it is exceedingly difficult to separate it from admixtures of acids and salts; but I believe, with Liebig and Gregory and others, that the chlorides, phosphates, and lactates, etc., of the gastric juice, are potent accessories, or even necessaries, to the action of the pepsine; and that, in short, as the whole matter is somewhat dark, the nearer we approach to the imitation of nature the better.

And now for the economical part of the question. An eminent brother physician at a celebrated watering place writes to me, saying, "I have used pepsine in pills. My chemist gives twelve shillings the ounce, and I find a scruple not too large a dose." Now, let us think of the practical working of such a thing. A patient consults a physician, who might order twenty-four doses, to last a week; and, after paying the fee of a guinea, he finds he has nearly as much to pay to the druggist for his medicine. Either the French must be a much more wealthy nation than we give them credit for, or they think they can extract no end of gold out of the dyspeptic tendencies of *milord anglais*. The liquor pepsiniæ, on the other hand, is *retailed* at sixpence an ounce; and a drachm is a good dose. Besides this, it contains all the peculiar salts and acids, as well as the pepsine, which go to constitute the peptic liquor or gastric juice; and it acts with perfect certainty, and is pleasant. We all understand the position and wants of the hard worked practitioner of our country districts. He does not wish to be troubled with niceties requiring this and that series of tests, but to be furnished by a respectable house with a really efficacious and reliable remedy. This is found in the liquor pepsiniæ, useful either by itself or in mixture; and the test of its efficacy may be applied by his good lady in making a milk custard for the youngsters, as one fluid drachm should coagulate sixteen ounces of milk in thirty minutes.

The aforenamed physician also writes, "I read that the pepsine is already shamefully adulterated." This is only to be expected, from the temptation held out by the exorbitant price of the article.

Touching the other question put to me, in regard to priority of introduction (which, however, is but of secondary importance), I beg to say that I have had nothing to do with this recent matter of so called pepsine from France or elsewhere. As may be seen by reference to a correspondence in the *Lancet* for 1856, in connexion with an article on Diabetes in the same journal for 1855, I derived the idea of the employment of gastric juice or peptic liquor from the beautiful experiments of Spallanzani. Other physicians, both before and after, seem to have used it with more or less result, and great merit is due to them. At

the same time, it would appear that they only used it for a limited time, or to a limited degree; and thus it became forgotten or neglected, or, at all events, never was made generally known. As regards mere chronology, it certainly was known and employed by the ancients as "coagulum", though to what precise extent, or for what definite purpose, I leave to be elucidated hereafter. In more modern yet old days, so to speak, it was also medicinally applied, as I find, for instance, on taking from my shelves the *London Pharmacopœia* of 1677, the time when Glisson and Scarburgh were Fellows, and Sydenham among the *Permissi*, that it is there mentioned. Under the general head of "*Catalogus Simplicium ad Pharmacopœiam*," there appears the following, under the subsidiary heading of "*Animalium Partes*".

"Coagulum. { Agni. Equi. Hœdi. Leporis. Vituli."

The great yet simple principle of its application not being then grasped by the profession in general, it must subsequently have fallen into disuse; for neither Dr. Paris nor any other standard writer on materia medica, that I know of, alludes to it in this light of a digestive. It has been my aim since 1851, as distinctive from those who may have used it specifically, to ground its application as a natural solvent of food upon a rational and scientific basis, and to demonstrate its utility in almost all diseases leading to waste of the body. My ultimate conclusion as to its value rests upon a foundation of facts obtained, at the very least, from upwards of 2,500 cases. This is a far greater amount of experience in the matter than any one else, so far as I am aware, can speak to; but all who have tried the remedy, whether as practitioners or patients, testify to the one chief point of its usefulness; and that, after all, is *the* object of our practice.

CASE ILLUSTRATIVE OF THE EFFECTS OF BELLADONNA IN ARRESTING THE SECRETION OF MILK.

By JOHN BURROWS, Esq., Liverpool.

MRS. B., aged 37 years, was delivered of her first child on the 17th of February, 1857. The labour was tedious, and required the aid of the forceps for its completion. The umbilical cord, being coiled three times around the neck of the child, and drawn so tightly as to arrest the circulation of blood within its vessels, asphyxiated the infant, so that no principle of life could be discovered. Resuscitative measures were adopted. Artificial respiration was continued for some time, as also friction along the spine, and the warm bath, without producing any mark of returning vitality. On the fourth day, the breasts assumed their maternal functions; on the seventh, they were full, tense, painful, and knotty, with a slight inflammatory blush, though spirit lotion had been applied. Having read, in *Braithwaite's Retrospect* for December 1856, an extract from the *Lancet*, August 9th, 1856, p. 176, in which two cases are given, exhibiting the efficacy of the extract of belladonna in arresting the secretion of miik, I resolved to use the first opportunity that occurred to try the effect of this remedy in so painful and tantalising a malady, and thought this a good case for testing its antilactescent power. I directed the areola, and a circle extending half an inch beyond it, of each breast, to be painted thickly over with the extract of belladonna, reduced to the consistence of thick paste by the addition of the acacia mixture. As the late Mr. C. T. Haden recommended the use of colchicum for the purpose of controlling arterial action in inflammation of the breasts and nipples, with the same intention I gave the following mixture:—

℞ Infusi rosæ comp. ℥vj; magnesiæ sulphatis ℥j; vini colchici ʒiij; aquæ menthæ piperitæ ʒxv. M. Fiat mistura cujus sumatur ℥j 4tâ quâque horâ.

The result was most satisfactory. In thirty-six hours after the application of the extract, the mammæ were cool, pale, and flaccid; and the knots softened and reduced in size. I advised the repainting of the areolæ; and, in two days after—*i.e.*, three and a half days from the first application—they were so reduced in size that they were smaller than during the latter period of pregnancy, and the knots could scarcely be felt. The effect was truly marvellous, and resembled the magic touch of the necromancer, rather than the therapeutic influence of a medicinal substance.

CONGESTION OF THE LIVER, WITH SEVERE VOMITING, HICCUP, AND CONSTIPATION, DURING TWELVE DAYS.

By T. HAYES JACKSON, M.D., Darlington.

WM. ELWOOD, aged 30, labourer, a temperate athletic man, came under my care on the 26th of last December, complaining of severe vomiting with constipation, which he attributed to exposure to cold, experienced three days previous to my attendance. His pulse was natural; the tongue was clean and moist; the skin cool; he had no pain in the abdomen on pressure; the bowels were constipated.

The treatment consisted in large doses of calomel and jalapine, pills of aloes with mercury, and of colocynth with mercury, compound colocynth pill, sulphate of magnesia, small doses of croton oil with extract of hyoscyamus, brandy and soda water, prussic acid with creasote; also sinapisms, a blister to the epigastrium, enemata of turpentine and castor oil, etc. All failed during eight days either to relieve the excessive vomiting, or to overcome the constipation.

January 3rd. Vomiting was more intense, with hiccup; his countenance was sunken; the pulse quick, small, and intermitting; the skin was cool; but he had no pain on percussion, nor distension of the abdomen from tympanitis. There was inordinate action of the abdominal aorta. The following medicines were ordered:—

℞ Pulveris opii gr. j; calomelanos gr. j; extracti colocynthidis comp. gr. iij; glycerinæ q. s. M. Fiat pilula 3tis horis sumenda. Mitte xij.

℞ Acidi hydrocyanici (Scheele's) ♏xij; misturæ amygdalæ* ℥iij. M. Fiat mistura, cujus sumatur ℥ss post singulas pilulas.

An enema, composed of one pint of warm water and two teaspoonfuls of mustard, was ordered to be administered every two or three hours, with the intention of stimulating the ganglia or sympathetic filaments of the intestines, and of exciting peristaltic action.

January 4th. The patient expressed himself much relieved this morning, having slept well during the night. Pulse full, soft, and quiet. No vomiting has occurred; but the bowels are still confined.

January 5th. Vomiting returned, after twenty-four hours cessation, though in a mitigated form. He was ordered:—

℞ Pulveris opii gr. j; olei crotonis gutt. j; extracti colocynthidis comp. gr. iij. M. Fiat pilula 3tis horis sumenda. Mitte viij.

After taking three of these pills, the bowels were freely opened.

January 6th. He was much improved. The vomiting occurred at longer intervals, but the bowels were relaxed. The following was prescribed:—

℞ Pulveris opii gr. j; extracti colocynthidis comp. gr. iij; glycerinæ q. s. M. Fiat pilula 3tis horis sumenda. Mitte viij.

Sumat pilulam crotonis cum opio horâ somni pro re natâ.

January 8th. He was improving daily; and was ordered to take a pill of quinine, with sulphate or iron, three times daily.

January 15th. He was convalescent.

REMARKS. Physiologists state that the liver secretes from seventeen to twenty-four ounces of bile daily, though by some this amount is considered too high, or variable under certain circumstances. In this case, however, in consequence of the increased morbid action of the liver, pint after pint of fluid, containing biline and bilipheine, were secreted, and, passing along the hepatic duct to the duodenum, were regurgitated into the stomach, and ejected by that organ.

I send this case in further elucidation of Dr. Brittan's opinion, "that intestinal obstructions are best overcome by opium in combination with aloes," rather than by drastic aperients alone. For instance, if a small portion of the intestines were inflamed, or spasmodically constricted, or intussusception had occurred, drastic purgatives in this case would have increased the evil by propelling the excreta to that portion of the intestines thus affected; and, instead of relaxing the contriction, would indubitably have produced a more confirmed lock.

* I have found the mistura amygdalæ, in combination with hydrocyanic acid, most invaluable in vomiting arising from nervous irritability of the stomach.

Diseases
OF
SPECIAL OCCUPATIONS.

No. I.

THE SHEFFIELD GRINDERS.

By JOHN CHARLES HALL, M.D., Fellow of the Royal College of Physicians, Edinburgh; Physician to the Sheffield Public Dispensary, etc.

IN commencing the first of a series of papers for the BRITISH MEDICAL JOURNAL, on the Diseases of Artisans, I shall endeavour, whilst treating of the peculiar disease induced in Sheffield by the calling of a *Grinder*, to give a general description of the habits of these men, the numbers employed in the various branches of grinding, the average ages of those now living, and other particulars of general interest with regard to the town of Sheffield and its geological position; for I quite agree with the editor of this JOURNAL, that these articles will derive no little portion of their interest from containing faithful sketches of the various peculiarities found in the towns which form the homes of those industrious workers in the hives of British enterprise, together with an account of the social and industrial conditions which lead to the diseases of artisans. Of course the Sheffield grinders are liable to various affections, like other men; and to the depressing influences on the animal economy which exist in all large towns; but, when speaking of the diseases of the Sheffield artisans,* I intend to treat only of those which arise in consequence of the occupations in which they are engaged. Our investigations will, I think, be facilitated by directing attention to—

A. The Town of Sheffield, and the Manufactures carried on in it.
B. The Sheffield Grinders, and the Nature of their Occupation.
C. The Grinders' Disease.

A. THE TOWN OF SHEFFIELD, AND THE MANUFACTURES CARRIED ON IN IT.

Sheffield is the principal seat of cutlery and other hardware manufacture, and the capital of the parish which bears its name, as well as of the ancient but not very clearly defined liberty of Hallamshire. It covers for a considerable extent the abrupt declivities and hills near the conflux of the rivers Sheaf and Don. Its canal opens a communication with the river Don, and other navigable rivers and canals; and its various railways afford a transit for passengers and goods to all parts of the kingdom. "Where now", says the historian of Hallamshire (the Rev. Joseph Hunter, F.R.S.), "is collected a numerous and active population, was anciently a deep solitude, the silence of which was broken only by our rivers pouring their waters in natural cascades through the woodland scenery. Who was the first to raise the axe amongst the forests of Hallamshire, or who first established himself and his family in one of its romantic valleys, it is now vain to attempt to discover."

The parish of Sheffield was unknown as one of the ecclesiastical subdivisions of the diocese of York before the time of the Norman conquest: it now comprises three entire Saxon manors, and a considerable portion of a fourth.

Few places in England present a more wonderful contrast between what they were and what they now are, than the town of Sheffield. Wide indeed is the difference now, when compared with that memorable period (from 1570 to 1584) when the unhappy Mary Queen of Scots was for so many years a prisoner, in the custody of the Earl of Shrewsbury, at Sheffield Castle; or when the Governor of Sheffield, Major Beaumont, surrendered this strong fortress to the Parliamentary forces under General Crawford, after a gallant resistance, on the 11th of August, 1644.

The parish of Sheffield is of considerable extent; it is more than ten miles in length, and its average breadth is about three miles, with an area of rather more than 22,000 acres. It contains many populous villages and hamlets, in the centre of which stands the large town of Sheffield, from which the parish derives its name. The following table will at a glance show how the town has increased. In 1615, the population was only 2,207; and, in 1736, the township of Sheffield consisted of 2,152 houses, with a population of 9,695.

TABLE I.

	Townships.	Population in A.D. 1801.	1811.	1821.	1831.	1841.	1851.	No. of Acres.	Houses in 1851.
SHEFFIELD.	Sheffield	31,314	35,840	42,157	59,011	67,967	83,447	3436	16,943
	Ecclesall	5,362	6,569	9,113	14,279	20,003	24,552	4180	5,194
	Brightside	4,030	6,899	6,615	8,968	10,089	12,042	2680	2,517
	Attercliffe	2,281	2,673	3,172	3,741	4,156	4,873	1336	1,001
	Nether Hallam	1,974	2,384	3,200	4,658	7,275	8,897	1902	1,689
	Upper Hallam	764	866	1,018	1,035	1,396	1,499	8836	304
	Total	45,755	53,231	65,275	91,692	110,891	135,310	22,370	27,658

1856.—Houses occupied		32,472
„	unoccupied	1,568
„	building	989
	Total houses	35,029

In 1856, the total population of Sheffield was 161,000. Since then there have been erected 1,307 houses; so that the exact number of houses in the six townships of Sheffield at this time is 36,366, and the population 164,000. The rateable value of the property in the borough of Sheffield is £366,394: 15: 8. The expenditure of the Sheffield Union, which includes the townships of Sheffield, Brightside, and Attercliffe, last year was £32,000; and of the Ecclesall Union, which includes Ecclesall, Upper Hallam, and Nether Hallam, £9,853: 6.

Sheffield of late years has rapidly increased in size and importance, and recent enterprise has greatly added to the wealth of many of our merchants and manufacturers; although, as a rule, the large fortunes are not made in Sheffield that we hear of in Manchester and other towns. Many of our local trades can also be carried on with a very small amount of capital, and hence the very large number of what are called "little masters' in Sheffield. The wages of many of the artisans are also much higher than in other towns.

The neighbourhood of Sheffield abounds in the three mineral productions which are most important to man; namely, *iron*, *coal*, and *stone*. The iron ore is found in many parts of the district, at a depth of from fifty to sixty feet; and, although it was most unquestionably the presence of the "raw material" which first led the inhabitants of the town of Sheffield to manufactures of iron, these mines are comparatively, in this our day, of little importance to the staple branches of their trade. Steel is what is principally required; and the native iron of the district is not adapted for conversion into steel, like the iron of other countries. About 32,000 tons of Swedish iron are annually imported into Sheffield, for the purpose of being converted into steel; and every year from ten to fifteen thousand tons of English iron are made into railway springs, etc. The iron obtained from the ore of the district is either used for castings or made into "rails", "merchants' bar", etc. What may be the effect of the recent process that has been patented by Mr. Bessemer, time alone can show; but we have evidence that foreign iron has been used in Sheffield for the last three centuries; and, in the accounts of the Church Burgesses of Sheffield for the year 1557, are the particulars of a payment to

* After I have finished the diseases of grinders, I intend to communicate a paper on the diseases of file cutters, etc.

Robert Moore "*for one stone and qrter of Danske iron*", and for "*x lib. of Spanysch iron*".

Below the iron lies the bed of coal, one principal seam of which runs under a portion of the town. The mean depth of the coal is about 120 yards, and the thickness of the bed from three to five feet. This bed is a principal source of that large supply of fuel which the manufactures of Sheffield require, and has been so for many years. The existence of railways of late years has of course extended the sources whence the supply is obtained. Previous to the employment of coke, charcoal was used in the smelting of the iron ore, and doubtless led to the destruction of many of our ancient forests. Evelyn has remarked, that "Nature has thought fit to produce this wasting ore more plentifully in woodlands than in any other ground, and to enrich our forests to their own destruction."

A magnesian lime-stone, similar to that of which the Houses of Parliament are built, and which was obtained from the quarries at Anston, is found in the neighbourhood of Conisborough and Roche Abbey. Sheffield is built principally of red bricks, the clay for making which is found in almost every part of the parish. In every direction around Sheffield are quarries of freestone, of various quality, which supply grind and mill-stones, flag-stones, and common roofing slate. Of the stones nsed for grinding, the greater part come from the neighbourhood of Wickersby and Dalton, about nine miles from Sheffield. These stones vary in size from twelve inches to the very large stones of seven feet diameter used in grinding saws. The "whitening" stones, used for smoothing articles before glazing, are brought from Brincliffe Edge Quarries, about a mile from the town.

In the early years of its history, the only extensive concerns connected with the trades of Sheffield were the furnaces and forges in which the iron was prepared for the use of the manufacturer; and the beautiful Park of Sheffield, in the midst of which stood the prison which so long held the Scottish queen, within the memory of man, was dotted with iron-stone "pit-hills". This land now is used for agricultural purposes, and hardly a trace of the mining operations remains visible. Sheffield did not enjoy in those times that almost entire monopoly it possesses at the present of the staple article of its manufactures—the *knife*. This country had an import trade in knives till the reign of Queen Elizabeth; and in the articles enumerated in the Custom-House books of the reign of Henry VIII (*British Bibliographer*), are *knives of Almayne, knyves of France*, and *knyves of Colloyne*. Stowe informs us that, in the fifth year of her reign, Queen Elizabeth laid some restrictions on this import trade, in order to encourage the London manufactures; London being at that time the principal mart for the finer species of cutlery. Now it is notorious that a very large portion of what is sold as "fine London cutlery" in the metropolis, both scissors, knives, and razors, are

"Sheffield made,
Both haft and blade;"

the name of the London house being stamped upon them here.

The year 1742 is memorable in the history of Sheffield for the introduction of a new manufacture. Mr. Thomas Bolsover, an ingenious mechanic, when employed to repair the handle of a knife which was composed partly of silver and partly of copper, was struck with the possibility of uniting the two metals so as to form a cheap substitute, which should present the external appearance of silver, and therefore capable of being used in the manufacture of articles in which silver only had previously been employed. He confined himself to the manufacture of buttons and snuff-boxes, etc.; but Mr. Joseph Hancock, one of the Cutlers' Company, very soon showed that, by this new method, the finest and most elaborately embossed plate could be imitated. Birmingham very soon obtained a share in the new manufacture; but to the town of Sheffield belongs the honour of the invention, and the "Sheffield plate" is still highly prized for its elegance and durability.

The manufactures of Sheffield in cutlery—knives, scissors, razors; in files, edge tools, joiners' tools, scythes, sickles, shears, saws, circular saws, steel, railway springs, anvils, vices, stove-grates, fenders, fire-irons; silver, plated, and Britannia metal goods,—are celebrated throughout the world. At the great Exhibition of all Nations, held in the Crystal Palace, London, 1851, 12,000 square feet were covered with articles manufactured in Sheffield; and to the town, five council medals, and fifty-five prize medals, were awarded. At the great Exhibition held in Paris, Sheffield fully maintained its world-wide reputation for its manufactured articles in cutlery, edge tools, files, saws, etc.; and, in addition to numerous medals, a grand medal of honour was presented by the Emperor of the French, to the town of Sheffield, "for the superiority of its steel and hardware".

The town of Sheffield is supplied with water by a company, the total area of whose present reservoirs is 173¼ acres, and which contain, when full, 898,000,000 of gallons. These reservoirs are situated at Redmires and Rivelin. Very extensive reservoirs are also in process of construction near Bradford, which, when completed, will afford to the town of Sheffield a supply of 10,000,000 of gallons of water daily. The principal store reservoirs at present belonging to the company are at Redmires, seven miles from the town. These are placed at an elevation of 1,200 feet above the level of the sea, and are filled from springs, and from the surface drainage of the land. The quantity of rain water at such an elevation is always considerable. The water is brought along an open stone conduit to the other reservoirs of the company, which are placed about a mile from the town, and they are at an elevation of 460 feet above the lower streets; so that the water, which is conveyed in iron pipes to the town, can be easily taken to the upper rooms of the house of any inhabitant who may require it.

The water is very pure; and an imperial gallon does not contain more than four grains of mineral and organic matters. About a grain of these is in a state of suspension, and can easily be separated by filtration; and about three grains of saline, earthy, and organic matters, are held in solution. The taste is agreeable; and few towns have purer or better water than Sheffield. In addition to private houses, the company supply many steam-engines, breweries, and other manufactories.

The supply of all the necessaries of life is abundant and cheap. Milk is brought into the town in barrels, in carts, and on ponies and asses, by the small Derbyshire farmers around Sheffield.

Two causes, in the first instance, mainly contributed to raise Sheffield into an important town; viz., the possession of vast mineral riches; and water power, by which, before the introduction of steam, grinding was carried on. The first steam-grinding was erected in 1786, when grinding became a separate branch of trade.

"Thus", writes the classical historian of Hallamshire, "has Nature been bountiful to the parish of Sheffield: not by bestowing upon it the most delicious fruits, double harvests, or perpetual summer; but the means and materials of durable and substantial comforts, so placed that they may serve as stimulants to labour. And, accordingly, her sons are an active, acute, and hardy race; patient of toil, unwillingly submitting to unnecessary restraints, aware of the advantages of their situation, proud of the reputation they have obtained for her, attached to their birthplace; and, wherever they go, remembering with more than common affection the tall graceful spire that surmounts the town, the woodland heights around it, and the streams which glitter along its devious valleys. Even the very sound of its waters poured over their broken weirs, or the slow moving wheel, the hiss of the grinding stone, and the noise of the forge, are grateful in recollection on the ear of the genuine son of what is fondly called 'old Sheffield'."

In Sheffield, the artisans have generally a house for themselves, and those who live in the suburbs frequently a garden. In times of good trade, at least, it is unusual to find two families under the same roof; and there is hardly an instance of an inhabited cellar in the town. The average number of inmates to each house is rather more than five; and many of these dwellings either front the street or open into moderate sized yards. It cannot fail to have been noticed, in reading what has already been written, that, at certain periods, numerous houses are returned as uninhabited in Sheffield. During a period of active trade, the demand for cottage houses is very great, and speculators are induced to run them up as slightly and rapidly as possible, in the hope of obtaining, for a time at least, an enormous percentage; and hence, when a reaction takes place in the trade of the town, the speculative builders, who have paid but little attention to what are really the legitimate wants of a population, find to their cost that the cottage accommodation that has been created is far beyond what is required.

I have already stated that there is probably less of the confined alley and narrow *cul-de-sac* in Sheffield than in many other manufacturing towns, and that a good deal has been done of late years to improve the sewers and surface drains of the town; but still much more is required to render perfect the sanitary condition of the inhabitants; and the working classes appear but little aware that all measures for effecting improvements in the drainage of the streets, the supply of water, and ventilation, may be rendered nearly inoperative for the obvi-

ating of the causes of disease, if a nidus of morbific effluvia be permitted to remain in almost every part of the confined court where the artisan opens his window in the hope of purifying his small habitation with the breeze of summer, but gets instead a mixture of gases from dunghills, ashpits, etc., or, what is even worse, because more insidious, from a soil which has become impregnated with organic matters imbibed long before, and now, though perhaps to all appearance dry and clean, emitting the poisonous vapour in its most pernicious state.

The importance of a plentiful supply of pure air and water, as well as of selecting a home that can constantly be cheered and lighted by the sunbeams, appears but little understood by many of the artisans of this country; a home in a dark back court being often selected on account of its cheapness. Some medical writers of no little authority have gone so far as to assert that impure air and want of light are the only real causes of scrofula; and, although other adverse influences may doubtless have a tendency to promote the mischief, impure air and want of light are often, at any rate, essential to its establishment. The scrofulous children of the artisans of Sheffield, admitted under my care at the Sheffield Public Dispensary, are most frequently brought from such abodes. In a very sensibly written essay, M. Baudelocque contends that, even if a child be fed on a sufficient quantity of good and nutritious food, if living in a house so placed that the sun's rays do not reach it, or the fresh air cannot be supplied in sufficient quantities, the strumous diathesis will in all probability be induced. "If", says he, "the house be small, dark, low, and badly aired, scrofulous disease will inevitably intervene;" and it is very certain that, in the houses inhabited by the artisans in the larger manufacturing towns, even when a sufficient supply of food is given, such food cannot properly be assimilated in the absence of light and pure air. What must inevitably be the result of keeping an infant in a close, dark, badly ventilated room? The external lymphatic glands, more especially those of the neck, enlarge; the hue of health will be exchanged for a pallor which gradually creeps over the countenance; the muscles become soft, the abdomen enlarged; and, in a very short time, the tuberculous constitution may be established, and this too in a child whose parents are perfectly healthy, and whose brothers and sisters have never exhibited any symptoms of phthisis. These evils of course exist in degree; and, even supposing a child brought up in such an abode to escape for a time, what must soon or late be the fate of such a one, first reared in a home placed amid the tainted air of some dark narrow back street of a large town like Sheffield, and then, at the age of eight, ten, or twelve, set to labour at the trade of a fork-grinder?

Excessive dissipation, no doubt, has a tendency to diminish the duration of life amongst many of the Sheffield grinders, although I am most happy to bear my willing testimony to the great improvement which of late years has taken place in the habits of these men. The early age at which so many of them commence their calling prevents, in many instances, even the imparting of the rudiments of education. Ignorance, improvidence, intemperance, and crime, are but too often congenial and inseparable companions; and those who have no resources within themselves but too often seek recreation in intoxicating drinks, and in pursuits which are little creditable to the civilisation of the nineteenth century. Still, as I have already stated, the social condition of the grinders has much improved. In my visits to various wheels, it has not been an uncommon circumstance to find the Sunday-school teacher employed in shaping a razor; and some of the most active and intelligent of the Committee of the People's College and the Mechanics' Institution working by their side. The fact is becoming more and more apparent to these men, and it must be made still more so, that the appliances of science can and will lessen the high rate of mortality which at present exists; and that recklessness which only contemplated, in years that are past, "a short life and a merry one", will, I trust, ere long become an exception rather than a rule. My experience as a Director of the Savings Bank in Sheffield also induces me to conclude, from the increased number of depositors, that some of these men are beginning to think more generally of to-morrow, and that habits of economy and prudence are on the increase. It may be added, that many of the grinders are now members of freehold land societies.

There is yet in Sheffield another very lamentable source of dissipation and wretchedness amongst its artisans: I allude to early marriages. How to support a wife never appears for one moment to enter into the calculations of the boys who get married. Many of the grinders select their "partners for life" from girls who, from a very early age, have been employed in warehouses, or from hair-seating weavers and spoon and comb buffers, and who are altogether ignorant of household affairs. What is the inevitable consequence? The wages of the husband are not employed to the best advantage. To *waste*, as a matter of course, succeeds *want;* home is made miserable; and, in the excitement of company at the public house, and in intoxicating drinks, the husband seeks that happiness which he has not at home. The evils produced by these early and thoughtless marriages, I honestly believe, cannot possibly be exaggerated.

In my next communication I shall endeavour to explain the nature of the occupation carried on by a grinder; to describe the wheels in which they work; wet and dry grinding, etc. I shall also show the number of men and boys at present employed; the average age of the men now working in the different branches of the trade; the ages, so far as they can be ascertained from the books at some of the principal wheels, at which, for some years past, the grinders have died; the effects of grinding on the animal economy; and, lastly, the means which appear best calculated to improve the physical and social condition of these artizans.

Surrey House, Sheffield, March 3rd, 1857.

British Medical Journal.

SATURDAY, MARCH 14th, 1857.

THE NECESSITY OF A MEDICAL COUNCIL FOR THE ARMY MEDICAL DEPARTMENT.

In our last impression, we gave our reasons for believing, with Mr. Martin, that for the shifting necessities of war, and for the startling emergencies which continually arise in the field, the medical department of the army should be governed by a medical officer or field inspector, who should be always in advance with the commissary-general, and should be capable, by his skill and forethought, of anticipating the immediate wants of the troops. It must be clear that this great and important office cannot be performed by an authority acting, perhaps, thousands of miles from the scene of action. Instead of being vastly behind the necessities of an army, as metropolitan directors must be in some cases, measured by the time necessary for transferring his orders, he should be always beforehand and forearmed. The deliberative portion of the machinery necessary for the due conserving of a well trained and expensive army—the power which has to deal with problems of a general nature, which can be considered better at headquarters, should, however, be of a very different nature. The medical affairs of the army, and we may say perhaps of the united services, cannot possibly be ordered properly by one man. We have an able medical director-general of our military force as it is, who, we believe, did his duty actively and well in the late campaign, but who was overwhelmed with obloquy by the public press, and burthened with responsibilities for duties which should not have been put upon him. The medical miscarriages of our army were attributed to Dr. Andrew Smith, at the same time that he was only allowed to interpret "regulations," and delegated with the power of a commissary of medical stores! It is clear that the medical department of our army cannot be starved in its authority in this manner; it is equally clear to all thinking men that so important a branch of the public service cannot be delegated to any one man, for the simple reason that no one man can possibly be found who comprises in his own person the necessary qualifications for the office. It is

difficult enough to pick out from the mass of mediocrity such a surgeon as Brodie, a physician as Bright, or a statistician as Farr; it must then be quite clear that it is quite impossible to obtain the eminent qualities of these three eminent men rolled into one, in the shape of a director-general of the army. For the execution of the more deliberative and wider embracing functions of the central medical authority, a council of certainly not less than three picked men, the best that science can afford, should, we think, be established. To these gentlemen should be entrusted the many and complex yet persistent duties necessary to keep our army in a perfectly healthy condition, spread as it is over every portion of the globe, and subject to a thousand different influences of climate, of country, and of peoples.

It may be said that that proposition is only a retrogression to the old medical board which was swept away by the Duke of Wellington; but we reply that it is not the name, but the men, we require. The board or council we plead for is no such scheme as that which was superseded by the appointment of a single director-general, but a real Council consisting of, to use a threadbare term, "the right men in the right place". The military authorities of past days may well have been disgusted with an ignorant and corrupt trio, composed of a successful apothecary from Weymouth, and two gentlemen who knew nothing of soldiers or their diseases but what they saw of the Guards in Hyde Park! It is easy enough to erect a department; but the providing of efficient men to work it is quite a different thing. Our increasing and most costly army can neither be handed over to the tender mercies of a mere Board of incompetent persons, nor should any single man be burthened with a task beyond his might.

When we consider the extent and variety of the duties of a Medical Council consisting of even three good men, we must confess they would prove no sinecure. Its scientific requirements alone would be of the very highest order, not to speak of the necessary administrative powers. In addition to these, it would have to direct the medical inspection of recruits; to select and apportion the medical and surgical stores, and medical comforts, suited to our various colonies; to direct the management of hospitals, and the treatment of disease, in the four quarters of the globe: it would have, in short, to direct all the multifarious medical and surgical affairs of the British army—a population equal to that of a great town, such as Bristol or Birmingham, scattered all over the globe, one month secure in home or colonial barracks, in the next landed perhaps in an enemy's country, and fighting against climate and difficulties of providing food, to say nothing of the casualties produced by fire and the sword. In France, where all the minute details of the army are attended to with scrupulous care, the preservation of the raw material of victory is most certainly not overlooked. The great Napoleon, whose eagle eye was ever watchful to husband the strength and health of his victorious legions, as early as 1802 caused the institution of the *Conseil de Salubrité*. This Council has existed in full force ever since, and only the ablest men are appointed to it. On the breaking out of the Crimean war, this Council was charged with all the medical arrangements necessary to preserve the health of the army; and this it did, as far as it was possible for a home authority to do so. The medical department of the French army was the admiration of our own scientific men at the beginning of the campaign; and, if it broke down at the end, it was because the money ran short at home, and because our ally had no such officer of health in the field as Mr. Martin has suggested.

If such a Council for the regulation of the medical and hygienic affairs of our forces as we have spoken of should be established, we trust that care will be taken to infuse into it a due proportion of the civil element. The appointment of mere military surgeons would not satisfy the necessary conditions, inasmuch as we require that scientific enterprise which is not so rife in our army as in our civil surgeons, for the reason that it is not called forth by the incentives to be found in the far greater rewards, honorary and pecuniary, which await the practitioner in civil life. The great importance of remodelling our army medical department is so incontestable, that we shall feel fully warranted in recurring to the subject when occasion requires.

THE WEEK.

Our readers will perceive that we have commenced this week the first of our long projected series of articles on the "Diseases of Special Occupations." When we first contemplated the publication of these papers, we proposed merely to treat of the diseases of artisans; but the more we have thought of the subject, the more it has developed itself; and we now think it quite clear that it would be narrowing it unjustly to limit it simply to a consideration of the maladies of any section of the community. We are all workmen in this busy hive—some with our hands and some with our heads, and we have all of us our peculiar morbid conditions arising from the undue exercise, or from the unhealthy conditions under which we pursue our different occupations—from the domestic servant who suffers with "housemaid's knee", to the priest who is tantalised with the "clergyman's sore throat"; not one link of the social chain is exempt from special physical impairments of some kind or the other. Under these circumstances, we have thought it necessary to enlarge the scope of our subject; and in doing so we trust that many of our associates will be led to contribute to the series, whose class of practice would not have warranted them in writing articles devoted to the diseases of artisans. We do not ask for long and elaborate articles when no time for such can be found. Letters and short articles, setting forth the actual experience of our associates on the very interesting subject under review, will serve materially to create discussion, and to elicit much interesting matter which perhaps may be omitted in more ambitious contributions. It is needless to say that many of our most respected associates have already forwarded us articles, so that the series will be continued without interruption until they are concluded.

The Medical Society of London has recently had under consideration one of those repugnant cases which sometimes interrupt the quiet course of the most carefully regulated of such institutions, but which, in the learned and respectable body of medical men which we have mentioned, are happily of very rare occurrence. The Society, through its Council, has been called on to judge whether the conduct of one of its Fellows has been such as to demand his formal expulsion, in accord-

ance with the provisions made for such an emergency in its laws. To the primary facts of the case attention has already been directed in the ASSOCIATION MEDICAL JOURNAL for Dec. 6, 1856, where some remarks were made on a handbill professedly issued by Dr. F. Richardson of Woolwich, in which the learned doctor undertook the cure of all diseases, setting forth, among his qualifications, that he was a "Fellow of the Medical Society of London". This production, printed in the most approved style of documents of the kind, having been brought under the notice of the Council of the Society, the Secretary was directed to apply by letter to Dr. F. Richardson, inquiring whether he were the author of the said handbill. No reply having been vouchsafed to this application, another letter was sent by the Secretary. To this Dr. Richardson sent an answer, in which he neither acknowledged nor denied the fact inquired into, but endeavoured to turn the Council from their object by adopting a course of special pleading but little calculated to exculpate him. The disrespectful tone of Dr. Richardson's letter, the strong presumptive evidence that he was really the author of the handbill, and the utter absence of that denial on his part which he might have made, caused the Council to recommend his expulsion to the Society at large. Accordingly, a notice was issued to each Fellow, that on the evening of Saturday last, March 7th, a special meeting would be held "to consider the propriety of expelling one of the Fellows of the Society", in accordance with certain of the Society's laws. On the occasion of the meeting, every opportunity would without doubt have been afforded to Dr. Richardson of exculpating himself from the charge. At a meeting of Council, however, held on the evening preceding the general meeting, he tendered by letter his resignation, which was accepted. Under these circumstances, it became unnecessary to proceed to the expulsion; but the Fellows of the Society, in a numerously attended meeting on Saturday evening, unanimously voted their approval of the step taken by the Council in accepting Dr. Richardson's resignation, expressing at the same time their unlimited disgust at the handbill.

We place this case on record, not so much for the purpose of holding up to public view the pitiable spectacle of a member of our profession descending to the adoption of means of which it is unnecessary to express at length our abhorrence, but rather with the object of congratulating the Medical Society of London on the jealous care with which its honour is maintained. To the Council of that body, who had in the first place the unwelcome task of investigating the charges made, praise is due both for the calm patience with which, we understand, they proceeded in so delicate a matter; and for the readiness with which they adopted that course which was most conducive to the honour of the body whose representatives they were. The adoption of any other course than that of at once seeking to remove the peccant member would have been a sad blow to that Society which boasts of the names of Fothergill, Lettsom, and Jenner; and no less would it have been a scandal to the whole profession. But while the Medical Society of London is ready to act as vigorously as on the recent occasion, and while its Councils consist of men who do not shirk the performance of duties however unpleasant, so long will the profession respect that venerable and learned body as one of the oldest and most steady supporters of its moral no less than of its scientific honour.

In the recent debates in Parliament on the Chinese question, the opportunity has not been lost (and, indeed, it could not well be) of commenting on the opium trade with the natives of the Celestial Empire in terms which would serve equally well for the use of the utter denouncers of alcohol or of tobacco. The great mass of argument, or rather of assertion, as to the injurious effects of opium-smoking is well known; but on the more moderate side less has come to the ears of the British public. A "China Merchant," however, writing in the *Times* of March 9th, quotes largely from the *Remarks on the Opium Trade*, published in a Chinese journal by the well-known Chinese scholar and missionary, the late Dr. Medhurst. The learned doctor wrote in condemnation of the opium trade; but the summary derivable from his remarks is thus given by the "China Merchant."

"The use of foreign opium among the Chinese is limited to comparatively a few." (If each man used one drachm a-day—and many use more—the total number of smokers in China, according to Dr. Medhurst, would be 2,000,000, or 0·6 per cent. of the population.) "Its effects vary according to the moderation or excess of each smoker. As to the illegal nature of the traffic, it is against the letter of the law, but not against any regulation that is even attempted to be enforced. The evils of the trade exist chiefly in the imagination of those who do not understand it. If they will let it alone it will probably before many years are passed die a natural death, from the Chinese growing sufficient opium for their own consumption. As Chinese opium is scarcely half the price of that imported, and now nearly as good, it will gradually take the place of that of foreign growth. Year by year it increases, and will ere long supersede it."

An able leading article on the same subject has also appeared in the *Times* of March 10th.

We do not advocate opium-smoking, and would strongly denounce the practice in this part of the world; but it must be remembered that there are certain eastern nations to whom the practice has become what the drinking of spirituous liquors and tobacco-smoking are with us; and in this case, as in others, it would be well if those who are so lavish in their denunciations would first take the trouble to ascertain whether all who smoke opium are really, any more than all beer-drinkers and all tobacco-smokers, in a hopeless state of perdition.

We have only just time, before going to press, to allude to the aggregate meeting of Medical Students which took place on Thursday evening in St. Martin's Hall. Upwards of five hundred students were present; and the meeting went off with an unanimity and spirit which must greatly aid the good cause of Poor-Law Medical Reform. We shall give a full report of the proceedings next week.

Association Intelligence.

COMMITTEE OF COUNCIL: NOTICE OF MEETING.

A Meeting of the Committee of Council will be holden at The Queen's Hotel, Birmingham, on Tuesday next, March 17th, at 1 o'clock.

PHILIP H. WILLIAMS, *Secretary.*

Reports of Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Tuesday, February 3rd, 1857.

Thomas Watson, M.D., President, in the Chair.

REPORT ON DR. SIBSON'S SPECIMEN OF PERFORATING ULCER OF THE STOMACH.

BY W. BRINTON, M.D., AND J. HUTCHINSON, ESQ.

The conclusion arrived at was, that the disease was not malignant. Among the indurated tissues were small, isolated portions of pancreatic gland structure. Dr. Brinton's careful microscopic examination had not been able to discover any cells resembling those of cancer.

GANGRENOUS ABSCESS IN THE LUNGS. BY J. S. BRISTOWE, M.D.

A man, aged 28, had been admitted under his care into St. Thomas's Hospital, on account of pleuro-pneumonia. He improved somewhat at first, but subsequently relapsed. Some weeks after his admission it was noticed that when he coughed his breath had a fœtid odour, which was not perceptible during ordinary respiration. About the same time he began to expectorate a prune juice fluid, which was also fœtid. Both these symptoms continued until the time of death, which occurred two months later. Cavernous breathing had been heard over the lower part of the left lung. At the autopsy, two spots of commencing gangrene, with consolidation around them, were found in the right lung. In the apex of the left was a gangrenous cavity of some size, and in its lower lobe was a yet larger one, surrounded by much old induration. No tubercles were found in the lungs. The lower part of the ileum was found much distended, the cœcum being obliterated and much constricted by the cicatrices of old ulcers. Smaller ulcers of the same character were found in other parts of the mucous membrane of the ileum. Dr. Bristowe suggested that the disease, both in the lung and the intestine, had commenced by the deposit of tubercle, a supposition which was supported by the fact that hæmoptysis had been among the earliest symptoms.

AMPUTATION OF THE HIP-JOINT. BY T. B. CURLING, ESQ.

Mr. Curling read a report of the conclusion of a case which he had formerly brought before the Society, in which amputation of the hip-joint had been performed.

The patient, a woman in very bad health, had submitted to amputation on account of a large tumour on the thigh. After removal, the disease proved to be medullary cancer deposited in the intermuscular areolar tissue, and not connected with the bone. The patient recovered well, and lived nearly ten months afterwards. Her last illness had been attended by the symptoms of a large growth in the chest. The autopsy had been performed in the country. The left lung was found compressed by a very large growth in the pleura, which the surgeons who performed the autopsy agreed in describing as medullary cancer. There was, however, no deposit in any other organ of the body, and the lung tissue itself was quite free from disease. A portion of the tumour had been sent up to town and carefully examined by Dr. Andrew Clark, who reported that it consisted merely of inflammatory products, and did not contain any of the elements of cancer. Remembering the circumstance that there were no deposits in the lumbar glands, or in any other viscera, Mr. Curling was inclined to agree with Dr. Clark, and to think that his patient had died from inflammatory disease, and without any recurrence of the original one.

PNEUMOTHORAX: METALLIC TINKLING PRODUCED BY THE HEART'S IMPULSE. BY H. BENCE JONES, M.D., F.R.S.

The patient, a man aged 25, had been ill two months, when he was admitted into St. George's Hospital on account of pneumothorax of the left side. The usual symptoms were present, and a splash might easily be produced by succussion. On auscultating the back of the chest, a metallic tinkling sound was found to be produced by each stroke of the heart. This continued to be a very distinct sign up to the time of death, which occurred more than a fortnight later. It was repeatedly listened to by the students, and the pulse could easily be reckoned by counting the tinkles. The autopsy showed pneumothorax, the fistula in the lung tissue being long and oblique. The pleural sac contained about five pints of thick fluid, and the pleural layers were very much thickened. Dr. Bence Jones remarked, that in an experience of about twenty years at St. George's Hospital, he had only met with one similar case.

BONY UNION AFTER FRACTURE OF THE CERVIX FEMORIS WITHIN THE CAPSULE. BY T. BRYANT, ESQ.

Mary H., aged 60, a lunatic inmate of the asylum at Guy's Hospital five years ago, when walking in the garden, fell and fractured her right thigh-bone. All the symptoms of fracture of the neck of the femur within the capsule were present, clearly indicating the character of the injury. A long splint was applied; but much difficulty was experienced in preserving the leg in the right position, from the restlessness of the patient. After some weeks confinement she was allowed to sit up, but her health soon began to fail, and she never walked again, and on June 30th she died. The specimens shown consisted of the upper parts of both thigh-bones. On the injured side union was complete, and had partly been effected by bone, partly by cartilage, and in part by fibrous tissue. The whole of the neck had been absorbed, and the articular head was united directly to the base of the great trochanter. The union was very firm, and the head of the bone was much indurated.

ANEURISM OF THE CORONARY ARTERY. BY T. OGIER WARD, M.D.

An old man had been seized in bed, while passing urine in the recumbent posture, with extreme oppression, and died in about fifteen minutes. The chest only was examined. The lungs were healthy. The heart was rather enlarged, and its right cavities dilated. It was covered with fat, and was empty, and flattened by the pressure of a large clot, weighing half a pound, that completely enveloped it, and with about four ounces of bloody serum distended the pericardium. This hæmorrhage proceeded from a false aneurism at the root of the aorta (which was generally dilated), involving the orifice of the right coronary artery, and opening by a very small aperture into the pericardium. The size of the aperture perfectly explained the mode of death by compression of the heart, and why it did not immediately follow the rupture.

TWO SPECIMENS OF DIFFERENT FORMS OF ADENOCELE. BY JOHN BIRKETT, ESQ.

In one case a small mammary glandular tumour had been removed from the breast of a young woman, in whom it had commenced to grow at the age of sixteen. The tumour was solid, and consisted of very perfect gland tissue, wanting only the efferent ducts. The second had been removed by Mr. Teale, of Leeds, from the breast of a lady, aged 56, the mother of eleven children, who had ceased to menstruate fourteen years ago. It had grown rapidly. It consisted of a cyst of some size, containing fluid, and large masses of intracystic growth. The solid structure showed the elements of gland tissue loosely formed, and wanting the due proportion of connective membrane. The latter was a good illustration of Sir Astley Cooper's "Cysto-sarcoma," and the former of the "Chronic mammary tumour;" yet both were proved by the microscope to be the same structure. Mr. Birkett drew attention to the difference in age of the patients; the difference in rapidity of growth in the two tumours, etc.; remarking that the only difference in elemental constitution, was the substitution of surrounding fluid, in the one case, for the developed fibrous or connective tissue binding together the gland acini of the other. Might this serous fluid be regarded as the plasma from which the fibrous tissue ought to have been developed, had the rate of growth been slow enough to permit of it?

HAIR-PIN REMOVED FROM THE FEMALE BLADDER. BY. T. HOLMES, ESQ.

A young married woman had passed a hair-pin of the usual bent form into the urethra, and three weeks later consulted a surgeon respecting it. Mr. Faithorn, of Chesham, under whose care she came, succeeded in removing it with forceps without any previous incisions or dilatation of the urethra. It was much bent in removal. It came out thickly crusted with phosphates. She recovered quickly, and no inconvenience remained.

COLLOID CANCER OF THE OMENTUM. BY W. BRINTON, M.D.

An elderly lady had died, as was supposed, of cancer of the liver. She had been much distressed by vomiting, but no hæmatamesis had occurred. The liver had been felt enlarged, but there was also a distinct tumour below it. The autopsy showed colloid cancer in the liver, and also in the omentum.

CARCINOMA OF THE STOMACH UNDERGOING A CURE.
BY S. WILKS, M.D.

Martin F., aged 65, was admitted, under Dr. Gull's care, into Guy's Hospital, on August 6th, 1856, and died November 24th. For a year before admission he had suffered from vomiting, and other gastric symptoms, accompanied by great emaciation, indicative of an obstruction at the pylorus. He was so weak that he was obliged to be placed in bed, and he appeared as if he could not survive many days. A tumour was felt at the pylorus. He took but little food, and this, in part, remained down. After the expiration of three or four weeks the vomiting was less urgent, so that he soon was able to pass several days without any sickness at all. After this his condition was tolerably uniform; he did not improve in general health, although he did not retrograde. The nourishment he took was small in quantity, but remained on his stomach, and at the same time the pyloric tumour was less distinct; in fact, fresh visitors to his bed side were unable to detect it. He died at last rather suddenly.

The *post mortem* examination showed a recent pleurisy as the immediate cause of death. There was no other disease in the body, except that of the stomach. Some large glands were seen occupying the lesser curvature, and the pylorus felt hard, and, in fact, constituted a tumour, owing to the neighbouring tissues being adherent to it. On opening the stomach the little finger could be passed through the pylorus. The walls were not thicker than usual, although diseased; the coats were blended together, and amongst them was a yellow, amorphous material, which was, probably, dead cancer. Two of the enlarged lymphatic glands in the lesser curvature, each of which was about the size of a walnut, contained a soft semi-fluid material, such as is seen in decayed exudations, particularly cancer. In a third gland some true encephaloid matter was found; this emitted a milky juice, and showed large nucleated cells beneath the microscope. In the midst of it, however, was some degenerating structure, as in the others, which sent out radiating streaks throughout it; so that it was very clear that in a short space of time, even his remnant of cancer would have disappeared; and then the question would have arisen as to the nature of the gastric disorder from which this man had died. It was tolerably certain that this case exemplified the instance of a man who had been suffering from cancer of the stomach for the usual period, and that then being placed under different circumstances (to say nothing of medicine), the disease not only ceased to grow, but the morbid deposit which already existed began to decay. A relief to the symptoms followed, and an unexpected prolongation of life. Should this result have been due only to the man's feeble powers, which were unequal to the formation of new structures, it would show that cancer may sometimes be starved out.

GREAT ENLARGEMENT OF THE HEART WITHOUT VALVULAR DISEASE
BY S. WILKS, M.D.

Charles G., aged 45, was admitted, under Dr. Wilks' care, into Guy's Hospital, in December, 1856. He had had good health until about three months before, when he began to experience oppression at the chest and difficulty of breathing. These symptoms increased until swelling of the legs came on; and, on his admission to the Hospital, he had all the appearance of a man labouring under advanced heart disease. From the extreme fatness of the patient, the cardiac sounds were with difficulty heard, but no bruit was audible, while the systolic sound was slightly double. Hæmoptysis came on, and other symptoms of severe pulmonary apoplexy; and the man died about a month afterwards. The body presented the usual appearance of death by heart disease. While the heart itself was very much increased in size, weighing above a pound and a half, its form was normal, as the due proportion was maintained between its several parts, but there was no valvular disease. The muscular structure was slightly fatty, and the coronary arteries were excessively diseased, as were also the small arteries in other parts of the body. This case is an example of a class occasionally met with of great enlargement of the heart without valvular disease: in the present instance the morbid condition of the small vessels may in all probability be considered as having been productive of an obstruction in the arterial system, the impediment to the circulation being at the periphery instead of at the trunk, and so leading to the usual consequence on the heart itself.

EXTENSIVE DISEASE OF THE KIDNEYS. BY GRAILY HEWITT, M.D.

From a case in which death was preceded by puerperal convulsions. The case from which the specimens exhibited were taken was one of considerable interest. A woman, aged 26, was seized twelve hours after delivery with dimness of vision, and quickly following convulsions, the attack of convulsions leaving behind it coma of a peculiar character. Convulsions occurred at intervals of about half an hour to an hour for the next twelve hours. Death took place sixteen hours after the first attack, and twenty-eight hours after the birth of the child. The left kidney was found exceedingly atrophied, weighing only 170 grains. The right kidney exhibited an advanced condition of that known as granular fatty degeneration. Its weight was eight ounces. The cortical substance was atrophied, of a dull yellowish white colour, with red striæ consisting, apparently, of enlarged veins. The tubular substance was also atrophied, and paler than usual. The texture of the kidney was very loose and flabby. Urine, bloody and albuminous, was found in the bladder. The valves of the heart were somewhat thickened. The walls of the left ventricle were about one-third thicker than normal; in places much exceeding this measurement. The endocardium was thickened, opaque, and of a dull yellow colour. The woman had lived for some time under great privations. It was afterwards ascertained that the lower extremities had been anasarcous six weeks before death.

Editor's Letter Box.

SPLINTS FOR OBLIQUE FRACTURES.

Letter from W. H. Winchester, Esq., F.R.C.S.

Sir,—In the Journal for February 28th, I see an account of the use, in St. Bartholomew's Hospital, of a new *railway splint*, invented by Professor Dummreicher, for the treatment of oblique fractures, and of which a full description is given in the *Medical Times and Gazette* for February 7th.

The introduction and use of such an instrument shows clearly the state of uncertainty in which the treatment of fractures is at present involved; and, indeed, until some fixed principle is established and recognised by the profession, it is impossible that it can be so uniformly successful as it ought.

I have on former occasions endeavoured to point out what I conceive to be the only correct method of treatment, and I would again direct attention to that principle, and earnestly solicit for it the serious consideration of the profession; believing—and from experience knowing—that by its adoption not only will oblique, but also compound or comminuted fractures be rendered as easily amenable to treatment, and indeed even more so, than many simple transverse fractures by the ordinary methods.

It would be well if the terms used were to be in some measure modified, in order that they may convey a more exact meaning. For instance, the word *straight* is used to denote an idea of perfection of treatment. Now, as no limb is perfectly straight, it is evident that it conveys an erroneous impression, and is likely to lead the inexperienced into difficulties, particularly when taking into consideration that the direct tendency of all the ordinary forms of apparatus is literally to produce such a state. *Natural form*, therefore, ought to be substituted for it. Again, as regards extension and counter extension, these terms should be confined solely to that process by which reduction is effected in cases of displacement; beyond this they should not be used,—for, implying as they do an active force in operation, the persistence of it cannot but be injurious. A *passive force* is required, viz., *retention*, in imitation of the natural process. During the integrity of bone, the muscles are retained within certain fixed points, their attachments, beyond which it is impossible to stretch them with impunity; but so long as they remain within these bounds, they are, as it were, in a passive or quiescent state. Our object, therefore, should be to retain them in the same position.

The treatment then resolves itself into these two heads, viz., *reduction*, or the obtaining, and *retention*, or preservation of position; and now the question arises, How is this to be accomplished? We know that early after a fracture reduction is easily effected; it is, therefore, to the retention of such position that the care of the surgeon must be directed, and for this all his skill and ingenuity are required. Now, as the limbs of no two persons are precisely similar, it is absurd to suppose that any one fixed form of apparatus can be applicable to all cases. To be beneficial it becomes necessary that it should have the power of adjustment, so as to enable it to be adapted to the

peculiarities of each individual case. Such particular form should be given to it, whether intended for lateral or posterior application, by previous adjustment to the sound limb; but should this be impracticable, it should be adjusted to the injured limb after reduction has been accomplished, and previously to its being obscured by the application of any bandage whatever. The apparatus having been arranged, a many tailed wet bandage should be applied to, without moving, the limb; and against the side the previously adjusted splint is to be laid; and, the splint being temporarily fixed by a strap so as to steady the limb, the roller is to be applied. Having done this, all that is necessary is to guard against displacement, either from accidents or, what is a more common cause, the movements of the patient himself. This is accomplished by allowing the splint to move freely with the limb; and therefore I have condemned the constant but injurious practice of fixing the splint to the bed, or in any way impeding its motion. So long as the limb is firmly secured to the splint, and that splint has assumed the natural form, affording thereby complete support throughout the entire shaft of the bone, there is no fear in allowing freedom of motion. By so doing the patient's comfort is considerably increased, the irritability and restlessness of a confined or constrained position is prevented, and speedy and perfect union is effected.

I will now briefly relate two or three cases, to show that by attention to the above principle, the treatment of cases, in themselves hitherto considered troublesome, is rendered easy and successful.

In the Middlesex Hospital, under the care of Mr. De Morgan, a case of oblique fracture of the femur, extending into the knee-joint, was treated as above described; and although the patient was, I think, upwards of sixty years old, he was walking about the wards at the end of six or seven weeks, and left shortly afterwards with free use of the joint.

Another case, under the care of the same gentleman, of oblique fracture of the leg, was treated in the same way; and in five weeks union was so firm, that the patient was enabled to put on his military boots, and left the Hospital at the end of six weeks quite strong.

Another case has recently occurred in the practice of my friend Mr. Norway; viz., a fracture of the neck of the femur in a woman 77 years of age. My long adjustible splint was used; and at the end of seven weeks was removed, when the union was so firm, that the head of the bone could be felt freely to move in the socket.

I would refer, for a more full description, to the *Lancet* for August 20th, 1853, and March 1st, 1856; *Medical Times and Gazette*, September 1st, 1855, and December 29th, 1855; and the ASSOCIATION JOURNAL, November 4th, 1853. I may also state that the different forms of my apparatus may be obtained of, and seen at the establishment of, Messrs. Savigny and Co., St. James Street, and that I shall be happy to give further explanation to any one who will favour me with a call.

I am, etc., W. H. WINCHESTER.

Surgeon to the Westbourne Dispensary.

14, Westbourne Terrace Road, W., March 4th, 1857.

OSSIFICATION OF THE PLACENTA.

LETTER FROM J. SCHOLFIELD, ESQ.

SIR,—It is now upwards of thirty years since I had two cases of partial ossification of the placenta and its appendages. In one case, after delivery of the child, the patient had uterine hæmorrhage. I found partial separation of the placenta; and in detaching it I found its adhesion to the lining membrane of the uterus very strong, except where the separation existed. Innumerable vessels ran from the membrana decidua directly into the surface of the placenta; they felt like icicles, and made the surface of the placenta feel hard. This was evidently a state of ossification. The woman recovered very well from her confinement. In about a year and a half after this she again fell in labour, and was attended by an old woman in the village. I was sent for, but was met before my arrival at the house and told that the patient was dead from hæmorrhage. Not many months after this I had a similar case; and these are the only two I ever had of this description, although I have been in practice upwards of fifty years. My opinion is, that the membrana decidua is the only medium by which the fœtus is supported; and if it was possible to reach the placenta and separate it, hæmorrhage would cease; but this is not practicable. An old assistant, who has been with me nearly thirty years, had a case of placental presentation, where the placenta was expelled four hours previously to the birth of the child. No hæmorrhage ensued after the expulsion of the child. On my stating my opinion to a medical friend, a few days since, he told me he had had a protracted case of midwifery the day before. The child was lost in consequence of a protrusion of a portion of the funis for some time before its birth. I recommended, in such cases, to return the cord and follow it up as high as possible by a plug, made with a linen rag or small silk handkerchief, smeared or not with a little lard. I know of no other plan for such an unfortunate circumstance.

I am, etc., JAMES SCHOLFIELD.

Middleton, near Manchester, Feb. 11th, 1857.

POOR-LAW MEDICAL REFORM.

LETTER FROM RICHARD GRIFFIN, ESQ.

SIR,—The present aspect of political affairs renders it desirable to postpone the general meeting of Poor-law medical officers until the forthcoming elections have taken place. In the mean time I trust every union medical officer will make it his especial business to lay the grievances of the Poor-law medical staff clearly and forcibly before the candidates for parliamentary honours. Let the profession positively refuse to vote for any man unless he give a distinct promise that he will do his utmost to obtain justice for us. Let each of us point out the iniquity of the system which compelled 290 medical men to throw up their appointments in 1855, and 249 in 1856, and which allows an average payment of 2*s.* 9¾*d.* only for attendance on the sick poor in an illness of a month's duration; that this paltry sum of 2*s.* 9¾*d.* is to cover the cost of drugs, instruments, pharmaceutical appliances, servant, horses and carriage, tolls and taxes, besides numerous other inevitable expenses incidental to a medical practice; that the education required to qualify and render us eligible for our important and responsible duties is laborious and dangerous, as well as expensive, and involves the sacrifice of several years for its attainment; that the duties are most arduous, demanding attendance by day and by night, and exposure to every variety of weather which the recurring seasons can produce, and to every morbid poison and source of infection and epidemic disease by which life can be shortened; that the remuneration for medical attendance on the inmates of sixty-six prisons is at the rate of 14*s.* 5¼*d.* per head, or probably twenty times that sum for each case of actual illness, clearly showing that more sympathy and care are evinced in procuring professional aid and medicines for the convicted offender than for the sick and innocent poor; and that attention in the former case is recognised as worthy of its reward, whilst in the latter it is deemed so unimportant that it may with perfect indifference, as far as the executive is concerned, be the occasion of loss; that it is the very natural result of this system that the public suffers both in the diminished service it receives from the labouring class and in the increase of poor-rates; in confirmation of which it has been stated "the number of paupers, made paupers by sickness, constitutes seventy-two per cent. of the total of paupers." Let the union medical officers be firm in their resolves to obtain justice, and success will ultimately crown their efforts; that our exertions have not been entirely fruitless, is apparent from the fact that last week the Poor-law Board issued a circular letter to each union, recommending a modified form of the district medical relief book, by which our labours will be slightly lessened, as each sheet is ruled for a month instead of a week; it is a copy of one of the forms transmitted by me to the Poor-law Board in July last, slightly altered, but not improved; the large space left at the end of each line for observations would have been better divided into separate columns, and placed in juxtaposition with the necessaries ordered for each week. By the substitution of this form the ratepayers will be considerable gainers, as there are 2597 district medical books constantly in use, which will last at least twice as long as formerly.

In my last letter I advised the union medical officers to request an order from the relieving officer or overseer when required to attend on consultation paupers out of his district. This has already been acted on by a gentlemen in this neighbourhood in the case of an arm-presentation, for which he is entitled to receive £2; whereas, by the old plan, he would have had an approving conscience only for his reward. Let every union medical officer do likewise, and some of the savings in the union books may pass from the ratepayers pockets into those of the profession.

In the name of the Poor-law Medical Reform Association I

beg thus publicly to offer our most cordial thanks to the students of nearly all the Hospitals and schools of medicine in England for their noble conduct in voluntarily coming forward to tender us their aid in this prolonged struggle for justice. I have also the pleasure to acknowledge (as particularly requested) the receipt of £2 17*s.* from the students of St. Thomas's Hospital, which sum has been carried to the account of the association. I am, etc.,

RICHARD GRIFFIN.

12, Royal Terrace, Weymouth, March 7th, 1857.

P.S. The length of this letter (in which I have largely quoted from the rough sketch of a petition hastily penned by our friend Dr. Hodgkin just before his departure for Palestine) prevents my sending a continuation of my correspondence with the Weymouth Board of Guardians, who have not yet given me a copy of the charges upon which the resolutions were founded. I shall not, however, let the matter drop, as guardians must be taught that union surgeons are not to be trampled on with impunity. The chairman of the Board has resigned; and a guardian said publicly it was in consequence of my "violent conduct"; but this I cannot credit, as another reason was assigned.

POOR-LAW MEDICAL REFORM: THE APPROACHING PARLIAMENTARY ELECTIONS.

LETTER FROM CHARLES F. J. LORD, ESQ.

SIR,—In furtherance of Poor-Law Medical Reform, I beg *now* earnestly to call the attention of all concerned in the question to the approaching Parliamentary elections, which unforeseen events have so accelerated.

The excitement created by the renewed efforts of the medical officers so long ably marshalled by Mr. Griffin, and the spontaneous demonstration this week so nobly making by the medical students of the land, render this period eminently adapted for the movement I proposed to the Editor of the *Civil Service Gazette* on the 21st ult.

A force should be immediately organised to secure outspeaking to every candidate for a seat in the House, and to his canvasser for votes. At every hustings, promises should be sought of the candidate, that attention shall be given to Poor-Law Medical Reform; and, in many cases, pledges secured from him, giving an assurance of his support and cooperation when "returned".

Men familiar with electioneering tactics, can best say *how* these efforts should be brought to bear to secure the proposed end. Short statements of the case might be prepared, printed and well circulated in every county and borough; loud knocks should be made at the committee rooms of the rival candidates.

Judicious but "well-seasoned" handbills might be freely distributed—*facts*, not *caricatures*—though the former are so *outré* that they might be readily taken for the latter. Pithy "posters" something like the following:—

VOTE FOR "HEART OF OAK"!!

THE FRIEND OF THE POOR,

AND

THE FRIEND OF THE POOR MAN'S DOCTOR!

DOWN WITH "SCROGGINS"!

WHO LEAVES THE POOR MAN AND WOMAN IN SICKNESS

TO BE DOCTORED FOR A MONTH

At Fourpence per Case!!

Hitherto I have never taken an active part in a Parliamentary election beyond voting; but under the circumstances I suggest, I would do so. The poor-law medical staff has been delicately patient long enough, mildly remonstrating, respectfully petitioning and memorialising. These measures, and public meetings *alone*, are "used-up". The agitation I urge would be general, well-timed, special, well-aimed, "*telling*", through advertisements in every London and provincial paper, simultaneous letters to each editor, and sometimes leaders in furtherance of the righteous cause—the poor man's cause, and the cause of him who succours the poor man in sickness and at death.

To aid in effecting this object, I should feel it my duty to contribute £5 to an electioneering fund: some would give more, others less; the expense and trouble would be great, so also would be the gain; let us have "the long pull, and the strong pull, and the pull altogether". Three thousand poor-law medical officers, 16,000 medical men! The profession is too indifferent to its just public rights: science and benevolence may well go hand in hand with the exercise of political influence. I am, etc.,

CHARLES F. J. LORD.

New Finchley Road, Hampstead, March 10th, 1857.

ON THE SOUNDS OF THE HEART.

LETTER FROM A. P. STEWART, M.D.

SIR,—I have read with interest Dr. Halford's reply to Dr. Markham, in this day's JOURNAL, and beg you will do me the favour of inserting, in your next number, a few words in regard to the experiments at the Middlesex Hospital. It appeared to me, in common, as I believe, with all who watched the experiments closely, that the proof of the correctness of Dr. Halford's views, as to the regulating function of the pericardium, and the mode and direction of the heart's contraction, was complete. I am not yet convinced, however, that he has *entirely* made out his main doctrine, that the first sound is wholly caused by the tightening of the valves. Though at once convinced that the first sound had *in great part* disappeared, I remained, after repeated and very careful trials, decidedly of opinion that there was still present, as I expressed it, "a remnant of sound," quite distinct from the friction of the heart against the stethoscope, and very much resembling what is heard on listening, with the stethoscope, to the sounds produced by a mass of contracting muscle, *e.g.*, the fleshy part of the thumb. Dr. Goodfellow, I think, shared my opinion; but Dr. Seth Thompson, from whom I never differ without half-suspecting the accuracy of my own judgment, did not agree with me. He, however, very truly remarked, that the place for such an experiment was a quiet room, with three or four observers present; and that no reliable conclusions could be drawn from even the most careful observations made in a crowded theatre.

I am, etc., A. P. STEWART.

Grosvenor Street, Grosvenor Square, March 6th, 1857.

DISEASES OF SPECIAL OCCUPATIONS.

LETTER FROM EDWARD SMITH, M.D., LL.B.

SIR,—It would confer a great favour, if any of our associates could inform us, from their own knowledge, of the diseases, if any, to which those who use the diving-bell are especially subject, and chiefly in reference to diseases of the lungs.

I am, etc., EDWARD SMITH.

63, Grosvenor Street, March 11th, 1857.

ON THE AMOUNT OF MORTALITY FROM CHLOROFORM.

LETTER FROM JAMES ARNOTT, M.D.

SIR,—In the letter of the 7th February, which I had the honour of addressing to you, upon the subject of chloroform, I limited myself to remarks bearing on certain opinions which had been previously published in the JOURNAL; but, in doing so, it was necessary to advert to circumstances which, I find, may be misunderstood without further explanation. The great importance of the subject will, I hope, excuse this extension of my communication.

I conceive there is no question at present before surgeons requiring greater consideration than that of the effect of chloroform on the results of operations. Probably no more extensive or rapid change than the introduction of etherisation ever occurred in the medical art; but there are few, I think, who will now deny that there are at least grounds for the grave suspicion that we have been so dazzled by the discovery of a means of preventing the pain of operations, as not to perceive that this great advantage has only been obtained at a great sacrifice of life.

No one now disputes that a great number have died from the immediate or primary effects of chloroform; but it is still maintained by many, that these are its only fatal effects, and that there are no ulterior evil consequences.* The opinion

* In my former letter there is an error of the press, respecting the list of sudden deaths from chloroform in the ASSOCIATION MEDICAL JOURNAL. The correct statement is, that this list makes them amount to twenty-six in October 1853; whereas, in Dr. Crisp's, they amounted to forty-two in June of the same year.

[The list to which Dr. Arnott refers, was published in the ASSOCIATION JOURNAL on February 11th, 1853; and therefore could not have given statistics up to October of that year. EDITOR.]

that the after effects are beneficial, and that they promote the healing of the wound, has, I presume, been abandoned since the exposure of the fallacies contained in the statistical tables on which that opinion was founded.

The result of my own inquiries on this subject is, first, that if surgeons were aware of all the cases in hospital and private practice in which chloroform had proved suddenly fatal, they would hesitate before exposing their patients to so great a hazard as arises from its administration; and that, if even this amount of mortality had been foreseen on the first proposal of etherisation, it would never have been generally adopted: secondly, that the *sudden* deaths from chloroform constitute a very small proportion of the whole amount of mortality produced by it.

The ulterior and more numerous bad effects of chloroform can only be ascertained by statistics; that is, by learning whether more die now from operations than before its introduction, without our being able to assign any other cause for the increased mortality. It has been said by Dr. Snow and others, that we cannot attribute the deaths that occur some time after its administration to chloroform, because they are not marked by any peculiarity, or preceded by any peculiar symptoms; and because we cannot explain its mode of fatal action. Even granting the correctness of the assertion that chloroform produces no ulterior symptoms of a specific character, this reasoning would be incorrect, and opposed to analogy. We know that foul air and hæmorrhage exert a very fatal influence on the results of operations, yet the effects of neither are cognisable by any peculiar symptoms; nor do we know more of the mode in which they prove injurious, than we know how bark cures an ague.* No one would now dream of producing anæsthesia by syncope from blood-letting; yet Mr. Wardrop, in a case of anæsthesia (*Medico-Chirurgical Transactions*, vol. x) produced by taking fifty ounces of blood, says that the patient "suffered little from the effects of the operation; and, though she remained pale and feeble for a few days from the profuse bleeding, yet in a week she was better than most patients are who have undergone so severe an operation." This is the very language that has often been used in describing the condition of patients after etherisation. But it is not correct to say that there are no ulterior symptoms produced by chloroform. The excessive and long continued prostration that so often follows etherisation is surely contradictory to this assertion; so are the cases to which attention has lately been directed by Mr. Mowat (*Proceedings of the Crimean Medical Society*), in which "reaction is never thoroughly established, and the patient dies from exhaustion in from twelve to twenty-four hours;" and the similar cases still more recently noticed by M. Chassaignac (last number of the *Lancet*), in which "it would seem the injury done to the vital forces by the chloroform has been so profound that the patient could not recover from it. He recovers, it is true, from the primitive anæsthesia; but he remains in a state of half-stupor and prostration, and in a short period succumbs." Some time ago, I was informed of a case (not publicly reported) in which convulsions continued during twelve hours after etherisation, and which terminated in death.

It has been objected to the determination of this question by statistics, that the attempt to do so is yet too early. But surely, if eight years experience be not enough, what question of this kind can be so determined? If the results of a statistical inquiry be well marked, a much shorter period than this is amply sufficient. If half the number of cases of amputation and lithotomy were to prove fatal after chloroform, in the various hospitals of the kingdom, instead of one case in four or five, as formerly, during a period of one or two years, and without any other assignable cause than chloroform, would it not be monstrous to continue this terrible loss of life, under the plea that time enough had not elapsed for accurate statistics?

I have published statistical returns showing that there has been an increase in the mortality from amputation and lithotomy in the London hospitals, for the last three years and a half, to the enormous extent of 12 and 28 per cent. respectively; and the similarity of these hospitals in all important circumstances has given me an opportunity of doing so. As there are great differences amongst provincial hospitals, in respect to site, accommodation for patients, etc., such a standard for comparison cannot be formed as I have used for London; but it would be very useful if the mortality at the two periods were compared in separate hospitals independently. With this view, I subjoin a table showing the mortality in five hospitals. These are not selected; but they are all the hospitals, so far as I know, in which exact records have been kept and published, adapted for the present inquiry; and from the three first I formed the standard of the former rate of mortality in London.

Before Chloroform.

Hospitals.	Authorities.	Period of observation.	Cases.	Deaths.
St. Bartholomew's	Mr. Haig	1846	22	4
St. Thomas's	Mr. South	1842-47	49	13
University College	Mr. Porter and Mr. Cadge	1835-46	103	24
Guy's	Dr. Fenwick	1843-45	36	4
Oxford	Mr. Hussey	1838-47	69	5

After Chloroform.

Hospitals.	Authorities.	Period of observation.	Cases.	Deaths.
St. Bartholomew's	Medical Times and Gazette.	1855-56	31	9
St. Thomas's	Medical Times and Gazette.	1855-56	23	9
University College	Medical Times and Gazette.	1855-56	21	7
Guy's	Medical Times and Gazette.	1855-56	59	17
Oxford	Mr. Hussey	1848-52	32	8

Increase of Mortality since Chloroform.

Hospitals.	Per Cent.
St. Bartholomew's.....	10·9
St. Thomas's	12·5
University College	10·
Guy's	17·6
Oxford	17·8

If similar tables to the above were constructed, showing the difference in other hospitals, I am confident, from the great average increase during the last three years and a half, both in London and the country, that the same result would appear; and that, if, amongst a large number of patients, there should be only a slight increase or a decrease in the mortality, the exception could be accounted for by alterations in the construction of the hospital, or improvement in the general management.

After ascertaining that there has been a great increase of mortality, the next point to be determined is, whether other causes than chloroform might not have produced it. Now, we know that chloroform is a sufficient cause; we know its poisonous nature, from the large number of sudden deaths it has produced, the frequent asphyxias occasioned by it, and the effects described by Mr. Mowat and M. Chassaignac. What other likely causes can be assigned? When Dr. Simpson (in a discussion in the Edinburgh Medical Society) asserted that there had been a saving of life from chloroform, Mr. Syme attributed this, if it really existed, to improvements in the art of operating; so I have learned that the actual increase of mortality has been ascribed to a retrogression in surgical skill! Some, again, have assigned an increase of pyæmia as the cause; but statistics have shown that pyæmia was as common before the introduction of chloroform as after it, unless, indeed, one of the modes by which chloroform proves fatal be by predisposing to this affection. Or it may be alleged that hospital gangrene has existed in certain localities, and at certain times; but, if this were the case, it would not account for the long continued, steady, and extensive increase of the mortality. To ascribe the amply proved great increase of mortality to such causes, when we have one so obvious and sufficient in the universal use of chloroform, would be a strange departure from the usual rule in reasoning on such subjects.

I am, etc.,
JAMES ARNOTT.

London, February 21st.

[We must decline inserting any further letters on this subject. EDITOR.]

* *Post mortem* examination has thrown no light on this question; but it has often afforded consolation by exposing organic disease, which, under any circumstances, would have soon cut off the patient. In an unreported case of death from chloroform, lately brought under my notice, the arteries of a thigh, which was about to be operated on, were so diseased as to have rendered death from secondary hæmorrhage almost inevitable.

Medical News.

BIRTHS, MARRIAGES, DEATHS, AND APPOINTMENTS.

** In these lists, an asterisk is prefixed to the names of Members of the Association.*

BIRTHS.

*Coates. On March 4th, at 10, Circus, Bath, the wife of C. Coates, Esq., Surgeon, of a son.

Collins. On March 3rd, at 46, Gloucester Road, Regent's Park, the wife of W. J. Collins, M.D., of a daughter.

*Cooper. On March 10th, at Cromer, the wife of James Cooper, Esq., Surgeon, of a daughter.

Heward. On March 9th, at 56, Grosvenor Street, Grosvenor Square, the wife of Thomas Spencer Heward, Esq., of a daughter.

Ledger. On March 4th, at Kensal Villa, Harrow Road, the wife of Matthew Ledger, Esq., Surgeon, of a son.

Wilkinson. On January 30th, at the Ventine, Barbadoes, the wife of J. Lyte Wilkinson, M.D., member of the General Assembly, of a daughter.

MARRIAGES.

Godfrey—Rush. Godfrey, John Blennerhasset, M.D., to Mary, third daughter of John Roger Rush, Esq., of Craven Hill, Hyde Park, at St. James's, Paddington, on March 7th.

Wise—Sibbald. Wise, Thomas, Esq., Surgeon, to Anne, third daughter of Thomas Sibbald, Esq., of George Street, Edinburgh, on March 4th.

DEATHS.

Baker. On March 9th, at Staines, Middlesex, Sophia, wife of James Baker, Esq., Surgeon.

Clark. On March 5th, Harriet, wife of Frederick Le Gros Clark, Esq., Surgeon, of Spring Gardens.

Joseph, E., Esq., Surgeon, of Manchester Street, aged 52, on March 7th.

MacIntyre, William, M.D., late of Harley Street, at Brighton, aged 65, on March 2nd.

Mackinnon. On March 3rd, at Wiesbaden, Nassau, Jane Pryce, third daughter of the late Donald Mackinnon, M.D., formerly of Great George Street, Westminster.

Philp. On February 27th, at Nice, aged 19, Eleanor Read, eldest daughter of Francis R. Philp, M.D.

HEALTH OF LONDON:—WEEK ENDING MARCH 7th, 1857.

[From the Registrar-General's Report.]

The deaths registered in London, which in the first week of February rose to 1368, have continuously decreased since that time, and in the week that ended last Saturday were 1175. In the ten years 1847-56, the average number of deaths in the weeks corresponding with last week was 1160. For the purpose of comparison, this average must be raised proportionally to increase of population; in which case it will become 1276: and it will appear that the public health is at present so far good that the deaths last week were less by 100 than the number that would have occurred if the average rate of mortality had ruled.

The mortality from diseases of the zymotic order was last week unusually low, for the deaths referred to these did not exceed 171; whilst the corrected average for corresponding weeks is 244. Small-pox was fatal in only two cases, both of which were those of young children, and occurred in Clerkenwell; and it may be stated that London enjoyed almost complete immunity from this distemper or from its fatal attacks. Whether it be the result of causes that are temporary in their operation or otherwise, it is probable, considering the greatly increased population, that small-pox has never been less prevalent, or more subdued in its character, than at the present time. Measles in the previous six weeks averaged 27 deaths weekly; the number fell last week to 10. Twenty-two children died of scarlatina, a number which shows a decrease also in this complaint. The deaths from typhus declined to 26, and those from diarrhœa to 12. The most fatal complaint in the zymotic class was hooping-cough, which carried off 70 children. The deaths caused by diseases of the organs of respiration, which in the previous week were 301, declined last week to 262, of which 136 were from bronchitis, and 100 from pneumonia. Two deaths are recorded as caused by privation; two by intemperance. Six persons are returned who had attained the age of 90 or more years; and in this number is a pensioner in the Royal Hospital at Chelsea, whose age is stated to have been 100 years.

Last week the births of 970 boys and 888 girls, in all 1858 children, were registered in London. In the ten corresponding weeks of the years 1847-56, the average number was 1649.

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 30·122 in. The mean reading of this instrument was above 30 in. daily during the last ten days of February, and the first five of the present month. The highest reading last week was 30·43 in., and occurred on Sunday (the 1st instant). The mean temperature of the week was 43·1°, and was 2·9° above the average of the same week in 43 years (as determined by Mr. Glaisher). The highest temperature in the week occurred on Sunday, and was 55°; the lowest occurred on Thursday, and was 29·5°. The range of the week was therefore 25·5°. The mean dew-point temperature was 37·9°; and the difference between this and the mean temperature of the air was 5·2°. The wind which blew on the first two days from the east, was afterwards generally in the west. There was no appreciable amount of rain. The horizontal movement of the air varied frem 10 miles a day to 150.

The late Snow Storm. Mr. J. W. Carr, of Colchester, thus writes to the *Times* of March 10th:—"The most remarkable change of temperature took place yesterday (March 8th) that I ever observed. The morning was clear, with a brisk wind from the north-west. A few minutes past 10 a.m. there was thunder and a terrific gust of wind from the south-east, which lasted about forty seconds. The wind again veered to the north-west, but the temperature rose to 56° Fahrenheit in the shade. At three minutes past 11 a.m. there was a heavy fall of hail and snow, and in the course of seven minutes the thermometer fell 19½°. This extraordinary change was registered on two instruments, one with a north aspect and the other south. The barometer was 29⅝ inches."

TO CORRESPONDENTS.

Letters and other Communications for the Journal should be directed to the private address of the Editor, 39, Curzon Street, May Fair.

To Contributors. The Editor would feel glad if Members of the Association and others, would cooperate with him in establishing as a rule, that in future no paper for publication shall exceed two pages of the Journal in length. If the writers of long communications knew as well as the Editor does, that lengthy papers *always* deter the reader from commencing them, this great evil would never arise. Brevity is the soul of medical writing—still more than of wit.

Members should remember that corrections for the current week's Journal should not arrive later than Wednesday.

Mr. Paget's paper on Laringismus, published in last week's number, was read before the Leicester Medical Book Society on February 11th.

Communications have been received from:—Dr. John Green; Mr. J. S. Gamgee; Mr. Richard Griffin; Mr. H. W. Rumsey; Dr. Cockle; Dr. Hayes Jackson; Dr. J. C. Hall; Mr. W. H. Winchester; Dr. G. Goddard Rogers; Mr. Augustin Prichard; Dr. C. Handfield Jones; Mr. John Burrows; Dr. David Nelson; Mr. J. Scholfield; Mr. W. M. Clarke; Dr. Edward Howell; Mr. Drew; Mr. Holmes Coote; Mr. R. H. Dawson; Mr. Hinton; Dr. W. Budd; Dr. W. Pruen (Penang, East Indies); B. L. (Cheadle); Dr. E. H. Niven; Mr. J. Hutchinson; Mr. C. F. J. Lord; Mr. Holmes; Dr. H. Jones; Mr. W. T. Fox; Dr. T. Boisragon; Mr. James Cooper; Mr. George Terry; and Mr. Stone.

ADVERTISEMENTS.

To Chemists and Druggists.—To be disposed of, on very advantageous terms, an old-established DISPENSING BUSINESS, which will bear every investigation; situate in one of the most populous and important Towns in the County of Devon. Returns, £500 to £600 per annum. Handsomely fitted shop and commodious residence, held at a moderate rent. Messrs. Lockwood, Lockwood, and Symes, Medical and Chemical Agents and Valuers, 1, Burwood Place, Hyde Park, London, W.

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